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OFFICIAL REGISTER OF HARVARD UNIVERSITY

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HARVARD MEDICAL SCHOOL



AND
SCHOOL OF DENTAL MEDICINE

1963-1964

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HARVARD MEDICAL SCHOOL

25 SHATTUCK STREET
BOSTON • MASSACHUSETTS 02115

AND SCHOOL OF DENTAL MEDICINE

188 LONGWOOD AVENUE
BOSTON • MASSACHUSETTS 02115

1963 — 1964

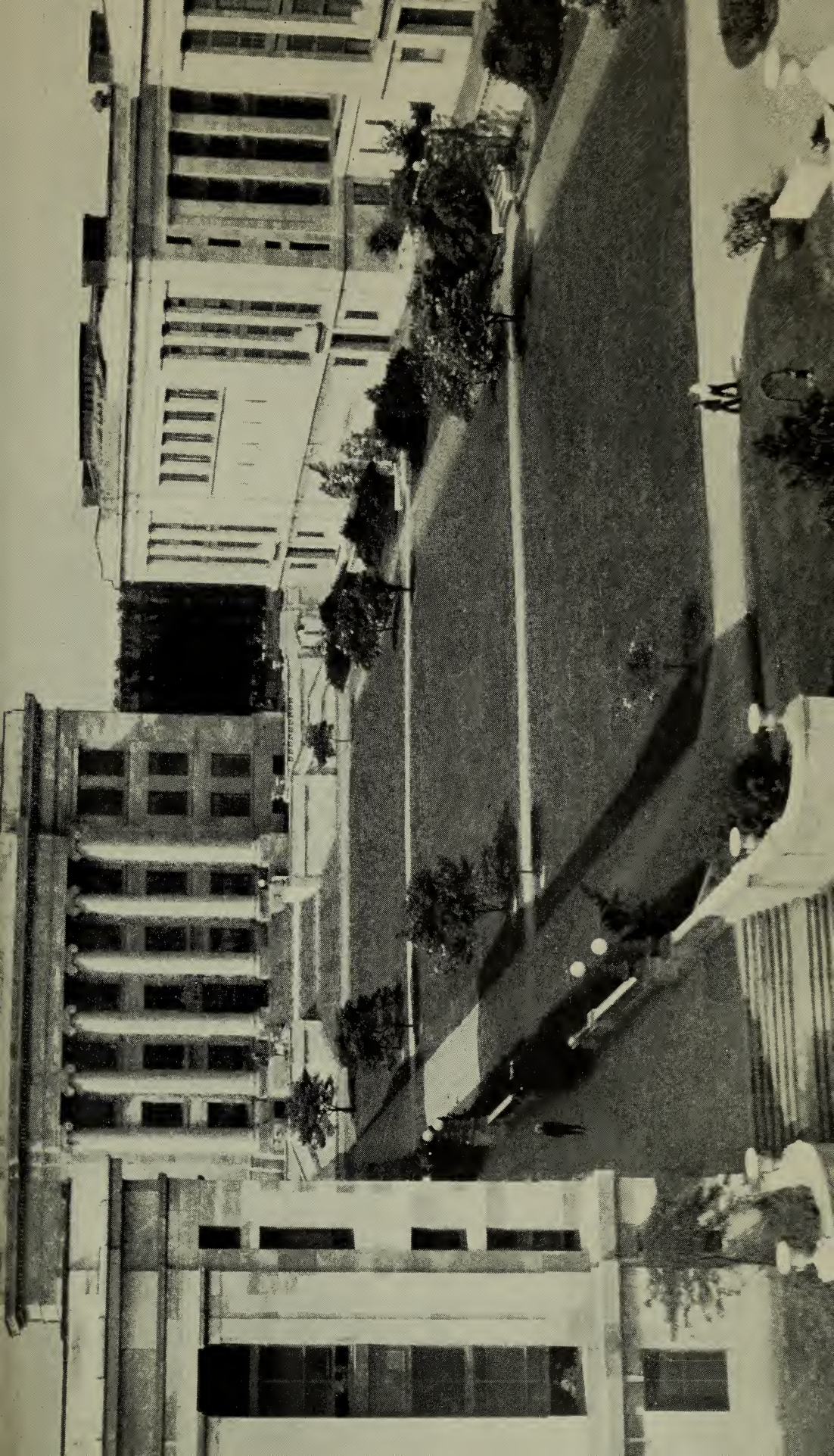
WITH AN ANNOUNCEMENT FOR 1964-1965

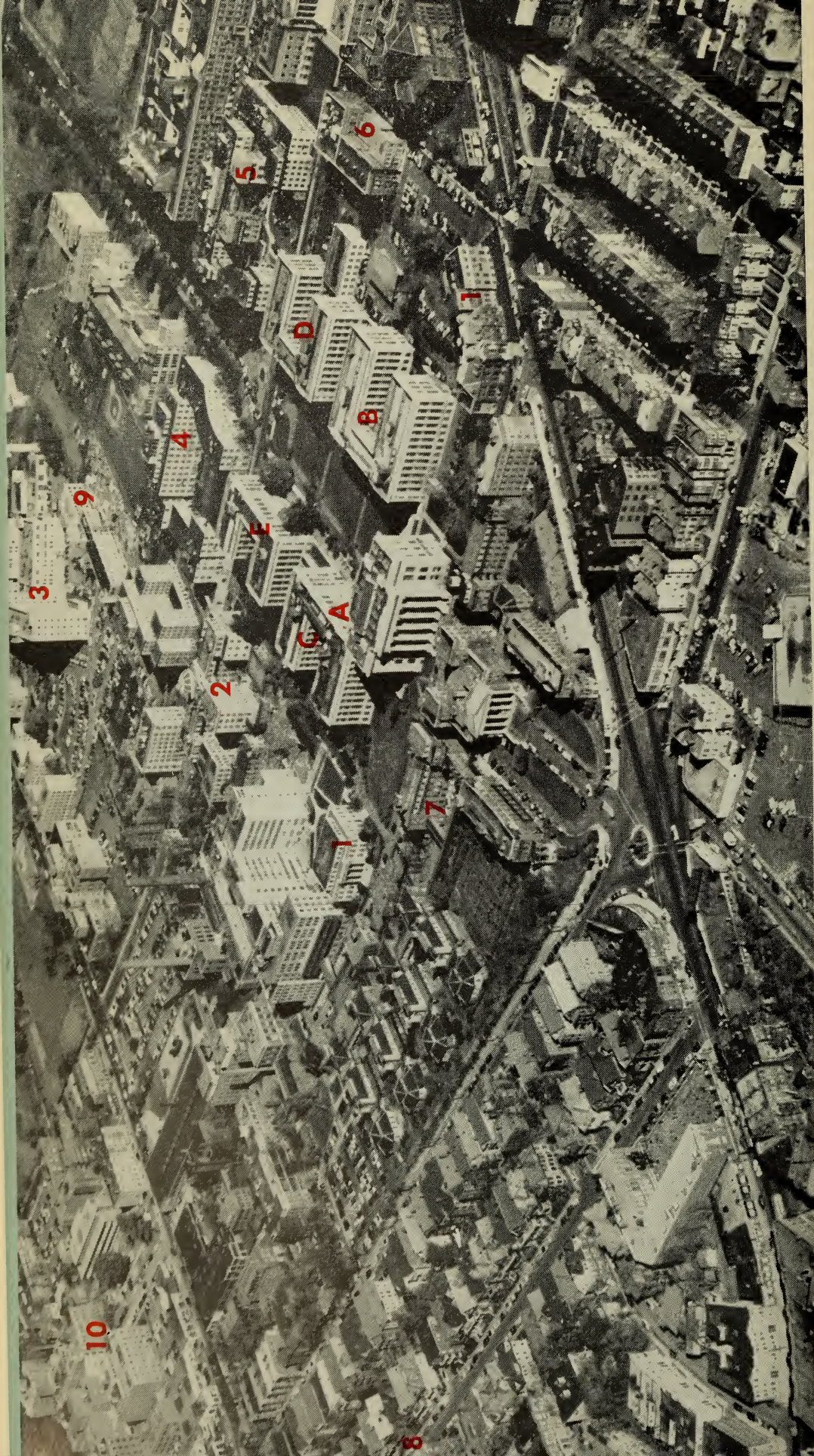
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The Offices of Administration of the Medical School are located in the Administration Building at 25 Shattuck Street, Boston; those of the School of Dental Medicine, at 188 Longwood Avenue, Boston.

The office of the President of the University is located at One Massachusetts Hall, Cambridge.

The Comptroller's Office is in Lehman Hall, Cambridge. It is open on all business days from 9:00 a.m. to 5:00 p.m., except Saturdays, for the receipt of fees, payments, and other financial business.





A, B, C, D, E. Harvard Medical School buildings. 1. Harvard School of Public Health. 2. Children's Hospital. 3. Beth Israel Hospital. 4. Vanderbilt Hall. 5. Boston Lying-in Hospital. 6. Harvard School of Dental Medicine. 7. Peter Bent Brigham Hospital. 8. Massachusetts Mental Health Center. 9. Judge Baker Guidance Center. 10. New England Deaconess Hospital.

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HARVARD MEDICAL SCHOOL

ACADEMIC CALENDAR FOR 1963-64

<i>Monday</i>	<i>June 10</i>	Summer courses begin for fourth year class.
<i>Thursday</i>	<i>July 4</i>	Independence Day: a holiday.
<i>Monday</i>	<i>September 2</i>	Labor Day: a holiday.
<i>Friday</i>	<i>September 13</i>	Registration day for first and second year classes.
<i>Monday</i>	<i>September 16</i>	Academic year begins for first and second year classes.
<i>Friday</i>	<i>September 20</i>	Registration day for third year class.
<i>Monday</i>	<i>September 23</i>	Academic year begins for third year class.
<i>Thursday</i>	<i>September 26</i>	Registration day for fourth year class.
<i>Saturday</i>	<i>October 12</i>	Columbus Day: a holiday.
<i>Monday</i>	<i>November 11</i>	Veterans' Day: a holiday.
<i>Thursday</i>	<i>November 28</i>	Thanksgiving Day: a holiday.
<i>Wednesday</i>	<i>December 11</i>	Second trimester begins for third year class.
<i>December 22, 1963-</i> <i>January 5, 1964</i>		Recess for first, second, and third year classes.
<i>Monday</i>	<i>January 13</i>	Second half year begins for second year class.
<i>February 3-7</i>		Examination period for first year class.
<i>Monday</i>	<i>February 10</i>	Second half year begins for first year class.
<i>Saturday</i>	<i>February 22</i>	Washington's Birthday: a holiday.
<i>Tuesday</i>	<i>March 10</i>	Third trimester begins for third year class.
<i>Wednesday</i>	<i>April 1</i>	Last day for filing application for the degree of M.D. in June 1964. Last day for filing application for scholarship for 1964-65.
<i>April 12-19</i>		Recess for first, second, and third year classes.
<i>Friday</i>	<i>May 29</i>	Alumni Day.
<i>Saturday</i>	<i>May 30</i>	Class Day for the Class of 1964.
<i>Saturday</i>	<i>May 30</i>	Memorial Day: a holiday.
<i>June 1-6</i>		Examination period for second and third year classes.
<i>Monday</i>	<i>June 8</i>	Second half year ends for first year class.
<i>Thursday</i>	<i>June 11</i>	Commencement.

HARVARD MEDICAL SCHOOL

ACADEMIC CALENDAR FOR 1964-1965

<i>Monday</i>	<i>June 8</i>	Summer courses begin for fourth year class.
<i>Saturday</i>	<i>July 4</i>	Independence Day: a holiday.
<i>Monday</i>	<i>September 7</i>	Labor Day: a holiday.
<i>Friday</i>	<i>September 11</i>	Registration day for third and fourth year classes.
<i>Monday</i>	<i>September 14</i>	Academic year begins for third year class.
<i>Friday</i>	<i>September 18</i>	Registration day for first and second year classes.
<i>Monday</i>	<i>September 21</i>	Academic year begins for first and second year classes.
<i>Monday</i>	<i>October 12</i>	Columbus Day: a holiday.
<i>Wednesday</i>	<i>November 11</i>	Veterans' Day: a holiday.
<i>Thursday</i>	<i>November 26</i>	Thanksgiving Day: a holiday.
<i>Saturday</i>	<i>December 5</i>	Introduction to the Clinic ends for third year class.
<i>December 20, 1964- January 3, 1965</i>		Recess for first and second year classes.
<i>Monday</i>	<i>February 1</i>	Second half year begins for second year class.
<i>February 8-12</i>		Examination period for first year class.
<i>Monday</i>	<i>February 15</i>	Second half year begins for first year class.
<i>Monday</i>	<i>February 22</i>	Washington's Birthday: a holiday.
<i>Thursday</i>	<i>April 1</i>	Last day for filing application for the degree of M.D. in June 1965.
		Last day for filing application for scholarship for 1965-66.
<i>April 11-18</i>		Recess for first and second year classes.
<i>Friday</i>	<i>May 28</i>	Alumni Day.
<i>Saturday</i>	<i>May 29</i>	Class Day for the Class of 1965.
<i>Monday</i>	<i>May 31</i>	Memorial Day: a holiday.
<i>June 7-12</i>		Examination period for second year class.
<i>Saturday</i>	<i>June 12</i>	Second half year ends for first year class.
<i>Thursday</i>	<i>June 17</i>	Commencement.

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HARVARD COLLEGE

This Board is commonly known as the CORPORATION

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SECRETARY TO THE CORPORATION

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1964

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1965

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*(The term expires, in each case, on Commencement Day of the year indicated.)

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* *Ex-officio.*

HISTORY AND ORGANIZATION OF THE HARVARD MEDICAL SCHOOL

The Harvard Medical School was the third medical school to be established in the United States and is the second oldest in point of consecutive years of service to medical education.

The first medical school founded in the Colonies was established in 1765 in the College of Philadelphia, now the University of Pennsylvania. The second was organized in 1767 in Kings College (now Columbia University) but teaching was suspended in 1776.

The Harvard Medical School is now nearing the close of its second century of teaching dedicated to the treatment and prevention of the ills of man.

On September 19, 1782 the President and Fellows of Harvard College adopted a report by President Joseph Willard and former Acting President Edward Wigglesworth embodying a plan for a medical school. This action was followed on November 22, 1782 by the appointment of Dr. John Warren of Boston as the first Professor of Anatomy and Surgery. In December, 1782, Dr. Benjamin Waterhouse became Professor of the Theory and Practice of Physic. The original faculty was completed in May, 1783, when Dr. Aaron Dexter was named Professor of Chemistry and Materia Medica.

The first degrees of Bachelor of Medicine were conferred in 1788. Until 1811, the degrees of Bachelor of Medicine and Doctor of Medicine were conferred, the former on graduation from the Medical School, the latter on examination at least seven years after graduation. In 1811 the degree of Doctor of Medicine was granted to graduates of that year and to earlier graduates who had not been admitted to it. All graduates since 1811 have received the degree of Doctor of Medicine.

During its long history, the Medical School has occupied seven

HARVARD MEDICAL SCHOOL

different sites. The first classes were held in the basement of Harvard Hall in the Harvard College Yard. Later they were transferred next door to Holden Chapel, a building which was originally the College Chapel but through the years has served as a carpenter shop, a chemistry laboratory, a museum, and is now the home of the Harvard Glee Club. To be close to such hospital facilities as might be developed in Boston, the Medical School, in 1810, was moved out of the Yard to quarters at 49 Marlborough Street (now 400 Washington Street) in Boston. Six years later, the Medical School occupied the first structure built especially for its use, located on Mason Street in Boston. At this time, and for a period of 42 years thereafter, the School bore the title of "The Massachusetts Medical College of Harvard University."

In 1847, new quarters were established on North Grove Street opposite the Massachusetts General Hospital and here the School remained until 1883, when the move was made to 688 Boylston Street and a building that was expected to be the "home of medicine for generations." The School's vigorous growth soon made these quarters inadequate. Accordingly, the five marble buildings that today form the Longwood Avenue Quadrangle were erected. At their dedication on September 25, 1906, Dr. Charles W. Eliot, President of the University, in his acceptance address, described them as: "The largest single addition to the resources of the University which has ever been placed in the hands of the Corporation since it received its charter in 1650."

These buildings were built on 11 acres of an original 26 acre tract, the remaining 15 acres being reserved for the hospital facilities that, it was expected, would be built around the School. Four hospitals and the Harvard Schools of Dental Medicine and Public Health are now located in this general area.

Prior to 1906 most clinical teaching was carried on in the Massachusetts General and Boston City Hospitals. Opportunities for clinical teaching and investigation have increased greatly since the Longwood Quadrangle was established, through the new hospitals surrounding the School and affiliated with it. Few other

HARVARD MEDICAL SCHOOL

medical schools can offer students the tremendous variety of clinical advantages, which, from the student viewpoint, are not a matter of large hospitals only, but rather are related to the number of patients in these hospitals who are under the care of instructors on the staff of the Medical School and thus available for teaching purposes. Each student comes into intimate contact, under supervision, with patients, beginning in the second half of the second year. This student-patient relationship grows steadily during the third year. In the fourth year students serve as clinical clerks and give their whole time to the study of patients.

BUILDINGS

The Administrative Building (A), with 60,000 square feet of floor space, contains the Faculty Room, the Administrative Offices of the Medical School, the Alumni Office, the Courses for Graduates Office, the joint library of the Medical School and the School of Public Health, the Warren Anatomical Museum, the News Office for the Medical Area, and the teaching laboratories for Histology and Neuroanatomy.

The laboratory buildings, designated by the letters B, C, D, and E, were all constructed on the same general plan—two parallel wings united at the front by an amphitheatre with a seating capacity of two hundred and fifty. To keep pace with present day requirements, the original facilities are continually being adapted, remodeled and even rebuilt while preserving the outside walls. In Building B, added research laboratories and teaching facilities have replaced the amphitheatre. Both the smaller rooms and the laboratories are designed on a unit system which greatly simplifies changes required in suiting these rooms to the future needs of departments. The amount of floor space varies considerably in each of the four buildings.

Building B accommodates the Departments of Anatomy and Pharmacology. In this building each wing has five floors and a total floor space of 132,000 square feet.

HARVARD MEDICAL SCHOOL

Building C provides space for the Departments of Biological Chemistry and Physiology, and the Office of the Division of Medical Sciences. In this building there are four floors in one wing and five floors in the other. The building has a total floor space of 111,525 square feet.

Building D is occupied by the Departments of Bacteriology, Pathology, Preventive Medicine, the Division of Medical Sciences, the Biophysics Laboratory, and laboratories of the Department of Medicine. In this building there are five floors in one wing and three floors in the other, with a total floor space of 85,000 square feet.

Building E houses the Department of Legal Medicine, the Department of Tropical Public Health of the School of Public Health and teaching facilities for Gross Anatomy. A new addition provides quarters for Surgical Research. There are three floors in one wing and four floors in the other, with a floor space of 62,000 square feet.

Vanderbilt Hall, the student dormitory, was opened in 1927 and is immediately adjacent to the Medical School buildings.

SCHOOL OF DENTAL MEDICINE

Founded in 1867, the Harvard School of Dental Medicine was the first university affiliated school for dentistry in the United States. The School, a responsibility of the Faculty of Medicine since 1899, offers a four year course that leads to the degree of Doctor of Dental Medicine.

During the first two academic years the courses of instruction are nearly identical with those of the Medical School. The third and fourth years are under the direct supervision of the staff of the School of Dental Medicine. The recipient of the degree of D.M.D. from the School of Dental Medicine is well prepared to meet State Board requirements for license to practice dentistry. Graduates are also ready for the advanced study and experience recommended for any of the specialties of dentistry.

HARVARD MEDICAL SCHOOL

Access to the research laboratories of the School in the elective time during the third and fourth years permits unusual training for those having dental research in mind as a career.

The requirements for admission parallel those of the Medical School, except that the Dental Aptitude Test is required in place of the Medical College Admission Test. Qualified students and graduates of approved medical schools who wish to specialize in dentistry may be admitted to the School of Dental Medicine with advanced standing.

A brief description of the program of the School of Dental Medicine can be found on page 272. Full details are available in the Dental School's Catalogue.

LIBRARIES

The Library of the Schools of Medicine and Public Health consists of:

Main Library (Administration Building, 2d floor)

Open: 9 a.m.—11:30 p.m. weekdays

9 a.m.—5 p.m. Saturdays

2 p.m.—6 p.m. Sundays

Anatomy Library (Building B, 3d floor)

Bowditch Library of Physiology and Biochemistry (Building C, 3d floor)

George Burgess Magrath Library of Legal Medicine (Building E, 3d floor)

Library of Dental Medicine (188 Longwood Avenue)

Lucien Howe Library of Ophthalmology (at the Massachusetts Eye & Ear Infirmary)

The card catalog in the Main Library shows the holdings of these libraries which contain 355,000 catalogued volumes and pamphlets and receive 2,200 periodicals currently.

The Main Library contains several collections of historical interest. The largest of these is the Warren Library, consisting of books and pamphlets on scientific and medical subjects collected

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by five generations of the medical men in one family. The Library was started by Dr. John Warren, first Professor of Anatomy and Surgery in the Medical School (1782), and was bequeathed to Harvard University by Dr. John Warren who taught Anatomy in the School from 1901 to 1928. The collection spans the years between 1476 (Caius Pliny, Secundus: *Historia Naturalis*) and 1928. Among the rarer volumes are Andreas Vesalius' *De Humani Corporis Fabrica* (1543), and William Harvey's *De Motu Cordis et Sanguinis in Animalibus* (1639).

All members of the University may borrow from the College Library at Cambridge. Messenger service is provided daily from the College Library and various other University Libraries.

The Boston Medical Library, located at No. 8 The Fenway, is the third largest medical library in the United States. It contains 230,000 cataloged volumes, 160,000 cataloged pamphlets, and 1,300 periodical titles currently received. Author cards for its books are filed in the Harvard Medical School catalog, and books and periodicals are available by messenger. Students wishing to go to the Boston Medical Library to read may do so weekdays 9 a.m. to 5 p.m., Saturdays 9 a.m. to 1 p.m. and evenings Monday and Thursday until 9 p.m.

The Boston Public Library issues cards to permanent and to temporary residents of Boston. Others may obtain cards upon payment of a small fee. Other Libraries of the Boston area, notably those of the Massachusetts Institute of Technology, add to the total book and periodical resources available to students.

The librarian is Ralph T. Esterquest, and Dale G. Friend is chairman of the Library Committee of the Faculty.

WARREN ANATOMICAL MUSEUM

The Warren Anatomical Museum was founded in 1847 by John Collins Warren, of the College Class of 1797, Adjunct Professor of Anatomy and Surgery from 1809 to 1815, Hersey Professor of Anatomy and Surgery from 1815 to 1847, Professor

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Emeritus from 1847 to his death in 1856, son of John Warren, the first Hersey Professor of Anatomy and Surgery.

The Curator of the Museum is Dr. Don W. Fawcett, Hersey Professor of Anatomy and the Associate Curator, Dr. George E. Erikson, Assistant Professor of Anatomy.

The collection comprises several thousand specimens illustrating both normal and pathological anatomy. These include dissections, skeletons, viscera, and the Dwight Collection illustrating skeletal variations and cross sections of bones. There is a growing number of gross neuropathological specimens and an extensive series of total brain sections prepared under the direction of the former Curator, Dr. Paul I. Yakovlev. These are available for study by qualified graduate students upon application to the Department of Neuropathology.

A unique collection of primate skeletal material is located in the Museum, including over a thousand specimens representing all of the New World and many of the Old World genera. These are available to graduate students upon application to Dr. Erikson of the Department of Anatomy.

Also housed in the Museum are the records of the Longitudinal Studies of Child Health and Development conducted between 1929 and 1960 by Dr. Harold C. Stuart, Professor *Emeritus* of Maternal and Child Health at the Harvard School of Public Health. These records pertain to 134 children followed from birth to their eighteenth year and 175 other children followed from birth for shorter periods. The data include health histories, radiographs of skeletal development, body measurements, measurements of intelligence and observations on the family and home environment. Permission to use these records for research purposes may be obtained through the Department of Maternal and Child Health, Harvard School of Public Health.

HOSPITAL FACILITIES

MASSACHUSETTS GENERAL HOSPITAL

This general hospital, founded in 1811, in great part owes its existence to the foresight and ambition of two members of the faculty of the Harvard Medical School, Dr. James Jackson and Dr. John Collins Warren, son of Dr. John Warren, the first Professor of Anatomy and Surgery at the Medical School.

In a circular letter addressed (August, 1810) "to the most influential and wealthy citizens of Boston," Drs. Warren and Jackson noted the benefits that would accrue to the ill of the community through establishment of a hospital, and to the collateral advantages that would follow. Among the latter, "are the facilities for acquiring knowledge which it (the hospital) would give to the students in the medical school (Harvard) established in this town."

The Hospital opened its doors in 1821 with Dr. Warren as Surgeon-in-Chief and Dr. Jackson as Physician-in-Chief. The close and salutary relationship established at the outset between the Medical School and the Hospital has continued to the present.

In the Hospital there are services in medicine, surgery, pediatrics, dermatology, genito-urinary diseases, orthopedics, gynecology, neurology, neurosurgery, anaesthesia, dental medicine and psychiatry, all of which are used in giving instruction in these special departments of medicine. The Hospital has 1,012 beds, all of which are available for teaching purposes. There were 27,586 patients admitted to the Hospital in 1962. Large clinics are also used for instruction in the above clinical subjects. Clinic visits numbered 204,583 last year, of which 12,336 were first visits of new patients. There were 42,792 patients treated in the emergency ward. Laboratories for pathology, bacteriology, chemistry, metabolism, medical and surgical research, and X-ray are maintained, and there is an excellent medical library, all of which are open to students in the Medical School.

In 1942 arrangements were made with the Vincent Memorial

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Hospital and the Hall Mercer Hospital to care for their patients in the Massachusetts General Hospital. The Vincent occupies the three lower floors of the Vincent-Burnham Building, with the three floors above comprising the Burnham Memorial for Children.

In 1943 the Collis P. Huntington Memorial Hospital and its associated laboratories of the Harvard Cancer Commission were transferred from their former location adjacent to the Medical School to the buildings of the Massachusetts General Hospital.

MCLEAN HOSPITAL

This hospital, situated in Belmont, is a division of the Massachusetts General Hospital for the care and treatment of patients with all types of psychiatric disorders. McLean Hospital was the first hospital in New England and is the third oldest mental hospital in the United States. It has a complement of 239 beds, with approved capacity of 278 beds, and has been a teaching hospital connected with the Harvard Medical School for many years. During the past fiscal year 386 patients were admitted to the hospital and 387 patients were discharged. It is equipped with laboratories for research in clinical physiology, neuropathology and neurochemistry, and clinical psychology. It maintains an experimental program in clinical application of social anthropology and sociology.

MASSACHUSETTS EYE AND EAR INFIRMARY

The Infirmary, incorporated in 1827, and associated with the Harvard Medical School since 1866, is a volunteer specialty hospital engaged in patient care, research and teaching in the fields of Ophthalmology and Otolaryngology. The Chiefs of the two clinical services are jointly appointed by the Infirmary and the Medical School, where they also hold full professorships.

Many members of the Medical Staff also serve on the Faculty and give instruction to the medical students both at the School

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and at the Infirmary itself where most of the 172 beds are available for teaching. The short average patient stay results in high occupancy and in the fiscal year 1963, 9,908 patients were admitted, of whom 9,867 had operations.

Although the Infirmary and its neighbor, the Massachusetts General Hospital, are separate and independent institutions, they join together in the operation of ambulatory clinics. In 1963, the Eye and the Ear, Nose and Throat clinics together recorded 70,227 patient visits.

Eye research at the Infirmary is conducted mainly by the Howe Laboratory of Ophthalmology which, though a department of the Medical School, has been housed at the Infirmary since 1932. In otolaryngological research, the best known laboratory is the Eaton-Peabody Laboratory of Auditory Physiology, a joint venture of the Infirmary and Massachusetts Institute of Technology.

BOSTON CITY HOSPITAL

This hospital with all its divisions contains 1,500 beds, including 107 bassinets for newborn and 110 beds for infants and children. Over 300 are available to the teaching units of the Medical School. The Second and Fourth Medical Services, the Fifth Surgical Service, and the Neurological, Neurosurgical and Radiological Services are under the direction of Professors of the Harvard Medical School, and in addition there are other specialties open to our students. In the Out-Patient Department and Accident Floor there were 416,543 patient visits during the year 1962.

The Thorndike Memorial Laboratory, established in 1923 for medical research, includes a metabolism ward and is an integral part of the Harvard Medical Unit. It is an internationally known center of medical investigation in the treatment of blood disorders, infectious diseases and disorders of the liver, kidney, thyroid and heart. The Sears Surgical Laboratory, established in 1955 as part of the Harvard Surgical Unit, is associated with the Fifth Surgical Service under the direction of the Professor

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of Surgery who is Head of that Service. It provides a modern amphitheatre, conference rooms, animal quarters, library, and laboratories for surgical research. The Departments of Neurology and of Pathology also maintain active research laboratories. In addition there are well-equipped service laboratories for pathology, chemistry, metabolism, and immunology. Four amphitheatres and various conference rooms are used in student instruction. The hospital maintains an admirable general working library and two special libraries.

PETER BENT BRIGHAM HOSPITAL

This hospital since its dedication in 1913 has been closely associated with the Medical School. The hospital, equipped for teaching and research in physical diagnosis, medicine, surgery, radiology, and pathology is situated on grounds adjacent to the Medical School buildings. The Chiefs of Service are Professors of the Faculty of the Medical School. There are 315 beds, all of which are used for teaching purposes. During the past year, 7,700 patients were admitted. There are also a clinic and an emergency service. The total number of visits to these facilities last year was 65,000. There are well-equipped medical, surgical, and pathological laboratories. The hospital has a School of Nursing and the oldest program in the country for dietetic interns. Also located within the hospital are the offices of the Medical Area Health Service.

BETH ISRAEL HOSPITAL

This is a general hospital with a capacity of 410 beds (including 20 pediatric, 56 obstetrical, and 62 bassinets). In addition to the ward beds many private beds are available for teaching. Incorporated in 1916, this institution has been located on Brookline Avenue around the corner from the Harvard Medical School since 1928 and has a close working relationship with it. The hospital is equipped for teaching and research in medicine, surgery,

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obstetrics and gynecology, pathology, pediatrics, psychiatry, and radiology, each under the direction of one or more full-time physicians who are members of the Faculty of the Harvard Medical School. There are also electrocardiograph, electroencephalograph, chemistry and metabolism laboratories, animal research facilities, a radiology department with facilities for X-ray therapy, and a department of physical medicine and rehabilitation. During the past year, more than 35,000 patients received care through this Hospital as in-patients, out-patients, in emergency ward or through the Home Care Program. Out-patient visits totalled 58,000 and more than 15,000 visits were made to the Emergency Ward. There were 12,000 patients admitted to the Hospital and 2,600 deliveries.

CHILDREN'S HOSPITAL MEDICAL CENTER

This is an affiliation of ten voluntary institutions concerned with the care of children, with teaching, with research, and with child health. Included are the following:

The Children's Hospital

This hospital has been located on Longwood Avenue adjacent to the Medical School since 1914. It is a general hospital for the care of children from infancy through adolescence. Pediatric, surgical, neurosurgical, neurological, orthopedic, dental, radiologic, psychiatric, pathologic, and otolaryngologic services with their associated specialties are maintained. Special clinical facilities are provided for adolescents. There are 350 beds, with an average daily census in 1963 of 262 patients. During the year ending September 30, 1963, it rendered 95,648 days of care to 10,933 in-patient admissions. (These figures are inclusive of The Children's Hospital, Infants' Hospital, Sharon Sanatorium, The House of the Good Samaritan, and the Judge Baker Guidance Center.) In addition, there were 121,185 visits to 51 out-patient clinics. Full laboratory and diagnostic services are provided for the study of material from the house and out-patient services.

The Sharon Sanatorium

This organization sponsors the Sharon Cardiovascular Unit composed of 25 beds devoted to the care of non-rheumatic cardiovascular disorders including congenital heart disease. It is included in The Children's Hospital as described above.

The Infants' Hospital

Originally the Thomas Morgan Rotch, Jr. Memorial Hospital for Infants, this hospital operated in close conjunction with The Children's Hospital from 1923 to 1961, at which time there was a complete merger. There are 41 beds which are devoted to the care of infants in addition to a separate neonatal nursery accommodating 12 infants under the age of one month, including pre-matures.

*The House of the Good Samaritan and
The Hospital and Convalescent Home for Children*

The House of the Good Samaritan is situated at 25 Binney Street adjacent to the Medical School. There are 54 beds devoted to the care of long-term and convalescent patients and to the study of rheumatic fever and rheumatic heart disease.

The Hospital and Convalescent Home for Children was formerly situated in Wellesley Hills.

In February, 1959, the renovated Good Samaritan building was reoccupied and became a long-term and convalescent care facility of the Children's Hospital. The Hospital and Convalescent Home for Children was closed about the same time and its activities transferred to the Good Samaritan. This now provides 54 beds including 13 beds for respirator cases on patients requiring long-term orthopedic care. The study and treatment of rheumatic diseases continues. Out-patient clinics are held regularly as a part of this research program. The building also houses the endocrine laboratories of The Children's Hospital.

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The Children's Mission to Children

A social service agency providing counseling service to parents whose children have medical and emotional problems. Also available is a foster home and a group home program for children who cannot remain at home.

The Children's Cancer Research Foundation

An affiliate of The Children's Hospital Medical Center, the Foundation conducts programs of diagnosis, treatment, and clinical investigation of leukemia and other forms of cancer in children, and of cancer research housed in two buildings, the larger of which is the Jimmy Fund Building.

Ten floors of laboratories are devoted to both basic medical research and to more specific programs of cancer research concerned with prevention, eradication, and cure of disseminated cancer, with greatest emphasis on cancer chemotherapy.

The Judge Baker Guidance Center

A child psychiatry clinic whose treatment, training, and research programs are affiliated with those of the Department of Psychiatry of The Children's Hospital Medical Center. The in-patient service has 26 beds. This unit has constructed a building in close proximity to The Children's Hospital, expanding and integrating the program in psychiatry.

BOSTON LYING-IN HOSPITAL

This hospital occupies a building started in 1922 at 221 Longwood Avenue. Richardson House, the private wing, was completed in 1930. There are 176 beds, of which 52 are on the ward service and 124 are on the private service. During the past year there were 8,364 adult admissions to the hospital. A total of 6,206 births were recorded. Chemistry, Pathology, Bacteriology, Cytology and Blood Bank Laboratories, and a well-equipped X-ray department are available for research. The Hospital which

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was founded in 1832 has been in continuous existence since 1873. A research building was opened in 1960.

FREE HOSPITAL FOR WOMEN

This hospital is devoted exclusively to the care of women, with emphasis on the treatment of diseases peculiar to them. It has 90 beds, of which at least 32 are available for teaching. In 1962-1963, 3,217 patients were admitted, of whom 2,940 were operated on. In the out-patient department 13,035 patients were seen during this time, of whom 1,784 were new. In addition to standard laboratory facilities and a library, it has laboratories for research, oriented chiefly toward pathology, reproduction and neoplasia.

MASSACHUSETTS MENTAL HEALTH CENTER (formerly the Boston Psychopathic Hospital)

This is a state institution for acute, curable, incipient, and doubtful cases of mental disease. The hospital was opened to patients in June, 1912 as a department of the Boston State Hospital. It became a separate institution in 1920. It has 200 beds, of which 14 are available for children. All of the beds are available for teaching and receive patients at the rate of about 800 a year. The hospital is equipped with psychological, clinical, biochemical, and research laboratories. The out-patient department is made up of an adult and child division and receives more than 4,000 new patients per year—total patient days number more than 30,000. In addition to the psychoses and neuroses, the clinical material includes cases of maladjustment, personality problems, behavior disorders of childhood and mental defect.

NEW ENGLAND DEACONESS HOSPITAL

A 375-bed general hospital which includes the Deaconess, Central, George F. Baker and the Palmer Memorial buildings for general beds; the Hospital Teaching Unit for ambulatory patients;

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the Norwich House for patients requiring intensive short-term psychiatric care, and the Cancer Research Institute. Sections of the hospital are especially equipped for diabetics; other sections are devoted to cancer, neurosurgery and thoracic surgery. It owns deep therapy equipment including a two million volt X-ray machine and radium. It maintains a Social Service department, out-patient tumor clinic, out-patient clinic for those receiving shock therapy and conducts numerous research projects.

VETERANS ADMINISTRATION HOSPITAL (WEST ROXBURY)

This is a 304-bed hospital for the care of general medical and surgical patients, incorporating a center for the care of patients with spinal cord injuries. It is also a center for cardiovascular surgery. All the beds are available for teaching; there were 2,560 admissions during 1963.

The hospital is administered by the Veterans Administration but is professionally closely associated with the Peter Bent Brigham Hospital (8 miles distant), with which it is affiliated for the training of residents. It has complete laboratory and X-ray facilities, a research laboratory, and its own library.

Other hospitals in the Greater Boston area in which some teaching activities are carried on include: Lemuel Shattuck Hospital; Long Island Hospital (physical diagnosis); Metropolitan State Hospital; Middlesex County Sanatorium; Mt. Auburn Hospital (radiology); Pondville State Hospital and the Robert Breck Brigham Hospital.

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A corporation known as the Harvard Medical Center was formed in 1956 by the Harvard Medical School and seven of its teaching hospitals “. . . to improve and advance the knowledge, practice and teaching of medicine . . . ; to assist in the advance-

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ment of medical research and investigation and the improvement of medical teaching facilities. . .”

The Center's Board of Trustees is made up of the Dean of the Faculty of Medicine, who serves as President, and a representative from each of the participating institutions, which are:

Harvard Medical School
Beth Israel Hospital
Boston Lying-in Hospital
Children's Hospital
Free Hospital for Women
Massachusetts Eye and Ear Infirmary
Massachusetts General Hospital — McLean Hospital
Peter Bent Brigham Hospital

Harvard is exceedingly fortunate in having both privately endowed and tax-supported teaching hospitals associated with the Medical School through joint faculty appointments, joint teaching responsibilities and joint research undertakings to foster maximally the correlation of teaching, research and patient care.

Tax-supported hospitals cannot legally be part of the Harvard Medical Center and it is for this reason that such important teaching hospitals as the Boston City Hospital, the Massachusetts Mental Health Center (formerly the Boston Psychopathic Hospital), and the West Roxbury Veterans Administration Hospital are not member institutions.

REQUIREMENTS FOR ADMISSION

In general, the Faculty of Medicine consider for admission students in good standing in arts or in sciences or graduates of colleges listed as approved in the “Higher Education Directory,” published by the Office of Education of the United States Department of Health, Education, and Welfare, or in any of the institutions included in “Approved Colleges of Arts and Sciences,” published by the Council on Medical Education and Hospitals

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of the American Medical Association. Credentials from foreign universities, in most cases, must be supplemented by a year or more of work in an approved university in the United States. Candidates for admission to the first year class must present evidence satisfactory to the Committee on Admission, not simply showing that they have passed the courses necessary to fulfill the requirements, but also that their college work and other credentials have been of such character as to give promise of work of high quality in the medical course.

The physician-of-the-future will function at the junction of the natural sciences, the social sciences, and the humanities. To fulfill his role, he should have had educational experience in all these areas of knowledge. This is best accomplished when secondary school, college, and medical school are viewed as a continuum.

The following are the minimal requirements to be met:

English: Basic skill in the English language, including the facility for clear expression in both the spoken and written medium, as evidenced by at least four years of study of English composition and literature, no less than one of these years being at the college level.

Foreign Language: Competence in a foreign language, either modern or classical, not merely to increase ability to read more extensively in the medical literature, but to increase understanding of language itself and the help this provides in developing the art of communication. Such an understanding presupposes the equivalent of at least two years of study at the college level. If an applicant has fulfilled the language requirement for a Bachelor's degree by obtaining a sufficiently high score on the College Board examination or by passing a college language placement test, he will be considered to have met the language requirement for admission to the Harvard Medical School. In such cases, however, an advanced course in the same foreign language is strongly recommended.

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Mathematics: Mathematics, the language of science, is becoming an increasingly important tool for the successful study of medicine. Mathematics through one year of integral calculus, therefore, is strongly recommended.

These basic skills in language and mathematics, which can be acquired in secondary school or in college, should be pursued in the former to the extent that an opportunity is available.

Chemistry: The equivalent of sixteen semester hours of chemistry in college, divided about equally between inorganic and organic, is required. It is important that this experience in chemistry include adequate time in the laboratory and familiarity with quantitative techniques, including volumetric analysis.

Biology: The student must have taken a general course in biology, which has emphasized the structure, function, natural history, and evolution of plants and animals. A satisfactory course should provide in college credits at least eight semester hours and adequate laboratory time.

Physics: College credit for eight semester hours must be offered.

Recommended Courses: Experience in physical chemistry, comparative anatomy, embryology, and genetics will be helpful during the first two years of medical school. Courses in psychology and the social sciences have value for increasing an understanding of human behavior, including the future physician's own, but such courses cannot be considered as a substitute for gaining familiarity with human activity through the study of history, literature, art, and religion. At least fifty percent of the undergraduate curriculum should be devoted to such areas.

These comments lead directly to a consideration of the choice of a college major. It should be the area that the student at this stage of life finds most interesting — the area about which he is most curious and that gives him the most satisfaction. Provided he is able to demonstrate competence in the natural sciences, the

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field of his college major will not influence consideration of him by the Admission Committee.

Honors courses, advanced courses, and independent work are encouraged for the added educational depth they provide, but such courses should not be taken with the primary motive of increasing one's chances of admission to medical school.

An increasing number of students are being admitted to advanced standing in colleges on the basis of superior ability and educational attainments at secondary school. The program of advanced placement is looked upon with favor when the enrichment of the student's college experience is the goal, but it is not so regarded when the aim is merely to speed the student through college. Leaving college at the end of the third year without the benefit of the fourth or culminating year is not to be recommended unless a student's education has been delayed, and he is older than his classmates.

In the instances of applicants who have received college credit on the basis of work done in high school or preparatory school for any of the required courses listed above, such credit will be accepted by the Medical School as fulfilling the requirements for the particular course or courses involved, provided the Medical School receives from the Dean's Office of the college concerned a written statement setting forth precisely what credit has been given.

No attempt should be made to anticipate the work actually given in medical school — to do so is a double mistake: it eliminates the chance to explore a field that will not be touched upon later, and it may give the student a false sense of security in a subject with which he has some familiarity, leading him to neglect it in medical school under the competitive pressure of other courses. The results can be disastrous.

The selection of students is based on a total appraisal of the personal and intellectual suitability of the candidate for medicine. The student planning to embark upon a career in medicine would be well advised, therefore, to strive — not for grades — not for a vocational training — but for a sound liberal education. He should

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give heed to "the development of . . . intellectual, moral, and aesthetic powers."

The Medical College Admission Test of the Association of American Medical Colleges is required of all applicants for admission, and is given in May and October of each year. Applicants are urged, whenever possible, to take this test in May of the year preceding the expected date of matriculation.

This test will be administered by the Psychological Corporation. Information regarding the test may be obtained by writing to Medical College Admission Test, The Psychological Corporation, 304 E. 45th Street, New York, New York 10017.

Interview: When the Committee on Admission deems an interview to be helpful, the applicant will be so informed.

One class only is admitted each year, beginning late in September. Application blanks are ready for distribution after May 1 of the year preceding expected matriculation. These should be returned to the Admission Office, Harvard Medical School, 25 Shattuck Street, Boston, Massachusetts 02115, as promptly as possible, but they will not be acted on prior to the following October 1. No applications will be accepted after the next December 1. Places in the class are usually filled by January 15. The Committee on Admission meet at regular intervals from October through February, considering applications as they are completed, but letters of acceptance are mailed only on November 15, December 15 and January 10. Applications will not be considered from candidates who have been refused admission on two prior occasions.

Since a complete catalogue is available in most college libraries, it is not usually sent to individuals.

ADMISSION TO ADVANCED STANDING IN THE HARVARD MEDICAL SCHOOL

Due to the increased number of places available during the third and fourth clinical years, up to 35 students may be accepted

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in transfer from other medical schools. Graduates of two year medical schools and students in four year medical schools who have compelling reasons for transfer are considered. Vacancies which occur occasionally in the second year class may also be filled by transferring students.

Only students of high scholastic standing will be considered. They must be recommended by the Dean of the school from which they come and must furnish a certificate of successful completion of medical studies at least equal to that achieved by the class to which they seek admission. As a rule, full credit for work done elsewhere will be allowed. All the requirements for the first year class (including the Medical College Admission Test), must have been fulfilled by applicants for advanced standing.

Applications may be obtained at the Admission Office after September 1, but will not be acted upon before February 1 of the year of expected transfer.

ADMISSION TO ADVANCED STANDING IN THE HARVARD SCHOOL OF DENTAL MEDICINE

The third year class may be increased by a small number of transfer students who have completed the equivalent of the first two years at the Harvard School of Dental Medicine. Vacancies in the second year class may also be filled by transferring students. No students may transfer to the fourth year class without a special vote of the faculty in each instance.

Only students of high scholastic standing will be considered. They must be recommended as promising candidates by the Dean of the school from which they come. Full credit for work done elsewhere will be allowed as a rule, but in certain cases additional work may be required. Ordinarily such requirements can be completed during the summer holiday preceding transfer. All the requirements for the first year class must have been fulfilled by applicants for advanced standing.

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INFORMATION FOR SERVICEMEN

The Harvard Medical School welcomes inquiries regarding future application from men who are now on active duty with the armed forces. The Committee on Admission cannot act on applications from men still on active duty and not released from service. The applications of men on terminal leave or whose date of discharge is definitely known may be considered by the Committee. The qualifications for admission remain essentially the same for veterans as for civilian applicants. Before the acceptance of a veteran can be final, the applicant will need to submit photostatic copies of discharge papers or similar evidence of honorable release. Where available the applicant should file also a copy of his "Report of Separation" on which is listed in detail his service record and training. If the Committee does not act favorably on an application, certifications furnished by the applicant may be returned, at his request. It is the responsibility of the applicant to take the necessary steps toward obtaining the governmental benefits for which servicemen are eligible. On request, the section on Veterans Affairs of the Comptroller's Office at Harvard will furnish a statement of the necessary procedures to receive such benefits required by the Veterans Administration. The University has established this office to form a central point for answering inquiries and advising veterans. For matters relating to veterans' affairs and not connected directly with the Medical School, the applicant should feel free to write to the Comptroller's Office, Veterans Affairs, Lehman Hall, Harvard University, Cambridge, Massachusetts 02138.

APPLICATIONS FROM FOREIGN STUDENTS

A candidate from a foreign university may file application for admission, but if he has attended a university or medical school which has not received approval by the Approving Authority of the Commonwealth of Massachusetts, he must receive specific approval from the Authority before he can be admitted. In

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general, it is the policy of the Committee on Admission to require that foreign students spend at least one year, and preferably two, studying at an undergraduate college in this country before applying for admission to the Harvard Medical School. This policy has been established in order both that the applicant may become familiar with the language, customs, and methods of teaching in the United States, and that the Committee may obtain a better evaluation of his qualifications and preparation for medicine. Exception to this policy may be made in the case of qualified applicants from schools in the British Isles.

Students seeking transfer to the second year class from foreign medical schools may be required to take the examinations in the first year subjects at the regular time they are given at the Harvard Medical School in January and June. Students applying for transfer to the third year at the Harvard Medical School will be required to take Part I of the examinations given by the National Board of Medical Examiners and to achieve scores satisfactory to the Committee on Admission.

FOREIGN STUDENTS

All students who are not citizens of the United States will be referred before registration to the Harvard International Office, Holyoke Center, 75 Mt. Auburn St., Cambridge 02138, where they *must* present a statement of admission, show their passports, and fill out a Student Registration form. They will then receive a card for presentation at registration, showing they have been cleared by the International Office.

This office serves as the official liaison agency between the University and the United States Department of State and Immigration and Naturalization Service. It maintains a registry of all non-U.S. citizens in the various Schools or Departments of the University, and it furnishes these members of the University community with information, not only on Immigration regulations, but on the facilities available to them through other Harvard offices, and from recognized outside organizations interested in

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the welfare, housing and hospitality of those unfamiliar with this country.

SPECIAL STUDENTS

Individuals wishing to take courses or to engage in special study under the Faculty of Medicine, who are not candidates for the degree of Doctor of Medicine or regularly enrolled as students under another Faculty of the University, may apply for admission as Special Students. Candidates should be mature individuals with serious and compelling reasons for wishing to pursue special programs of study at the Harvard Medical School. Application for admission to the status of Special Student should be submitted to the Committee on Admission of the Faculty of Medicine. Each of these students will be under the charge of the Dean and a member of the Faculty designated by the Dean to serve as his special adviser. Admission to Special Student status is ordinarily for a maximum of one year. Only with the approval of the student's adviser, the departments concerned, and the Dean may this period be extended.

Tuition Fee: Varies according to the courses taken and is based on a proportion of the annual fee for instruction.

Special Auditors: Either Special Students, holders of a doctoral degree, or men who do not have the doctor's degree but have some equivalent scholarly or professional standing, may with the approval of the department head, apply to the Committee on Admission to attend courses as Special Auditors. They may not receive credit or take examinations in courses. Fee: \$25 per course.

Special Students at the Medical School wishing to take courses under the Faculty of Arts and Sciences must register with the Dean of Special Students, Holyoke Center, 75 Mt. Auburn St., Cambridge, Massachusetts 02138.

COURSES FOR GRADUATES

COURSES FOR GRADUATES

The object of this department of the Medical School is to offer to graduates in Medicine opportunities to continue their studies in a thorough and scientific manner.

For information concerning courses offered, the Catalogue of Courses for Graduates should be consulted.

Facilities at the Harvard Medical School and the abundant clinical opportunities in the various hospitals are available for graduate instruction. Eugene C. Eppinger, M.D., Assistant Dean, is in charge.

DIVISION OF MEDICAL SCIENCES

The Division of Medical Sciences as part of the Faculty of Arts and Sciences of Harvard University, provides facilities in the departments of Anatomy, Bacteriology, Biological Chemistry, Pathology, Pharmacology and Physiology of the Harvard Medical School for advanced study and investigation leading to the degrees of Doctor of Philosophy and Master of Arts. In addition to the facilities of these departments, those of other research laboratories of the Harvard Medical School and its affiliated hospitals are available for the education of students. The Division offers special courses for graduate students in addition to those available to them in the Departments of Biology, Chemistry, Physics, etc. of Harvard University. The study program of the entering student may thus be shaped to meet his or her specific needs and background. The aim of the Division is to provide a broad education in the biological fields mentioned and specialization in one of them for those who wish to pursue a career of research and teaching in medical schools and universities, or of research in government, foundation and industrial laboratories.

Candidates for admission should have a thorough grounding in the biological and physical sciences. This will usually be more than the minimum for admission to medical school. Advanced

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courses in biology, chemistry, and physics are ordinarily regarded as preferable to undergraduate courses in bacteriology, biochemistry, histology, etc. A reading knowledge of German and one other modern language is desirable but not required for admission. The candidate will be required, however, to pass an examination in German and one other foreign language before graduation.

The minimum requirement for the degree of Doctor of Philosophy consists of not less than two years — at least one of which must be in residence at Harvard — devoted to advanced studies approved as suitable preparation for the degree by the proper department. Ordinarily three or more years are required for the completion of formal courses and preparation of a thesis. In estimating the amount of a candidate's study for the degree, the advanced work done in other graduate departments at Harvard or of other universities will be considered.

It is expected that the preparation of a thesis will require full time for usually not less than one and a half years. It must show original treatment of a fitting subject, give evidence of independent research, and be clearly, logically, and carefully written in good English. Following acceptance of his thesis, the candidate is given an oral Final Examination on the subject of his thesis and its relation to his special field and collateral subjects.

The minimum requirement for the degree of Master of Arts consists of a full year of residence and study. At least one quarter of the work must be more advanced than the regular introductory courses offered by the various departments, and should consist of research or individual preparation for research. In addition, each student must pass an examination in French or German. In some departments a thesis is required for the degree.

Candidates for the Doctor of Philosophy and Master of Arts degrees are registered in the Graduate School of Arts and Sciences for study in the Division of Medical Sciences. Students interested in graduate study in the Division should see the *General Announcement of the Graduate School of Arts and Sciences* and the pamphlet entitled *Higher Degrees in Medical Sciences*. These can be obtained from the Admission Office, Graduate School of

SCHOOL OF PUBLIC HEALTH

Arts and Sciences, 75 Mt. Auburn Street, Cambridge, Massachusetts 02138.

Inquiries should be addressed to the Chairman of the Division of Medical Sciences, 25 Shattuck Street, Boston, Massachusetts 02115.

SCHOOL OF PUBLIC HEALTH

The School of Public Health is one of the graduate schools of the University. Instruction and research opportunities are available in the several disciplines which underlie the protection of health and the investigation and control of diseases in communities. Some of these disciplines cut across fields in the medical, physical, and social sciences, and include such entities as biostatistics, epidemiology, public health practice, environmental health sciences and engineering. Other significant aspects of public health are represented by departments of demography and human ecology, microbiology, nutrition, tropical health, and maternal and child health.

Much of the teaching and research activity of the School is concerned with international health problems and the preparation of people for work in this field.

Students enrolled in the Medical School may take courses at the School of Public Health with the approval of the Head of the Department concerned. Further information and a catalogue may be obtained from the Registrar at 55 Shattuck Street.

GENERAL REGULATIONS

In order that the time of study shall count as a full year, students of all upper classes must register on the first day of the session. A fee of \$10 is charged for late registration.

For special and approved purposes fourth year students may be allowed to take a portion of their work elsewhere than at the Harvard Medical School, provided the application be approved

HARVARD MEDICAL SCHOOL

by the Dean in consultation with the Administrative Board and the head of the department concerned, and provided the student passes an examination on this work after its completion, conducted by a member of the Faculty of the Harvard Medical School.

EXAMINATIONS AND PROMOTION

Promotion from one class to another is contingent upon the satisfactory completion of the required work of each year. In each course, when indicated, students will be informed by their instructors as early as possible when the progress of their work is unsatisfactory.

Final grades in each course will be based upon such examinations or other tests as are determined by each department. Grading is on the scale of A, B, C, D, and E (denoting failure).

Grades are averaged on the basis that A = 1, B = 2, C = 3, D = 4 and E = 6. In calculating this average, time devoted to a course is taken into account.

Promotion Boards

Promotion Boards have been appointed for the first, second and third years to review the work of each student at the end of the year or, at their option, at other times. The membership of these boards consists of one representative from each department whose grading, as noted above, affects the student's grade average and one member from the Committee on Examinations and not as voting members, the Dean or Assistant Dean, *ex-officiis*, and on the Promotion Boards of the first and second years, the Dean of the School of Dental Medicine, *ex-officio*.

It is the duty of the Promotion Boards to promote those qualified, to notify formally students whose work in any course is unsatisfactory—in certain cases requiring that such students repeat the year's work—and to recommend that unpromising students withdraw from the School.

Opportunity will be given to students to appeal the decision

GENERAL REGULATIONS

of a Promotion Board either at a special meeting or at the next regular meeting of the Board. Appeals must be sent to the Chairman of the Promotion Board, Harvard Medical School and, to be valid, be received by him within two weeks after the issuance of a Promotion Board's notice of formal action.

General Examination

A committee will give a General Examination to each candidate for the degree of M.D. It will recommend to the Faculty those who pass and are otherwise qualified for the degree and for honors. The conditions under which a student shall take a General Examination and the character and content of the examination will be determined by the Committee subject only to rules of the Faculty.

A student becomes eligible to take a General Examination on successfully completing seven-eighths of his fourth year work. He may not anticipate the General Examination ahead of his class.

A student who fails three General Examinations is debarred from further attempts.

Rules Governing Promotion

1. A student with a grade averaging, for one year, from D(4) to E (6) will ordinarily be required to withdraw from the School.

2. A student whose grade for one year averages from 3.5 to 4 will be warned that his work is unsatisfactory. At the Promotion Board's discretion such a student may be required to repeat the year's work, or to withdraw from the School.

3. A student who is set back a year must repeat at least two assigned subjects and then he will not be promoted unless he obtains a grade of C or better in both of these subjects.

4. A student who is warned by a Promotion Board that his work is unsatisfactory and yet is permitted to advance with his class must attain for the ensuing year a grade average which is significantly better than in his previous year, failing which he must repeat the year's work, or, at the Board's discretion, he may be required to withdraw from the School.

5. A student failing in any course and yet permitted to ad-

HARVARD MEDICAL SCHOOL

vance with his class may not be promoted a second time nor will he be allowed to take the General Examination until that failure is removed.

6. A student failing any course will have an opportunity for re-examination only at a time set by the Promotion Board or with a succeeding class or section.

LEAVES OF ABSENCE

The Faculty of Medicine believe that certain students may profitably be granted a leave-of-absence from the School for specified periods of time in order to pursue at other institutions studies and research activities related to medicine. A leave-of-absence for this purpose should be requested from the Dean's Office. It will be granted at the discretion of the Dean.

WITHDRAWAL FROM THE SCHOOL

A student may withdraw from the School voluntarily upon application to the Dean's Office.

A student may be required to withdraw from the School at any time if in the opinion of his instructors he is not competent to pursue his assigned course of study or if the Faculty of Medicine determine that he is for any reason unfit to continue as a student in the School. In addition, any student who is absent without leave from scheduled courses for more than a total of 30 days during the academic year will be required to withdraw from the School.

Application for reinstatement by any student who has withdrawn voluntarily or who has been required to withdraw from the School, must be received in writing by the Committee on Admission of Students at least four months prior to the requested date of readmission. Reinstatement will be made only upon the recommendation of the Committee on Admission.

DEGREES

DEGREES

DOCTOR OF MEDICINE

Every candidate for the degree of Doctor of Medicine at this University must be at least twenty-one years of age, and of good moral character. He must have fulfilled all the requirements for admission to this Medical School; give evidence of having studied in a recognized medical school at least four full years, of which one year must be spent in the regular fourth year course of this School; have passed all the required examinations; have dissected the three parts of the body to the satisfaction of the demonstrator; and furnish evidence of having engaged in the practical exercises in Medicine, Surgery and Obstetrics.

The degree of Doctor of Medicine *cum laude*, *magna cum laude*, or *summa cum laude* may be given to students of highest rating in the class, on recommendation of the Committee on Examinations and the Faculty.

The degree of Doctor of Medicine *cum laude*, *magna cum laude*, or *summa cum laude* for a thesis in a special field may be awarded to candidates for the degree of Doctor of Medicine on recommendation of the Committee on Examinations and the Faculty. The work for this may have been carried out under the Tutorial System or by independent arrangement with any member of the Staff.

The degree is awarded for original and meritorious investigation in a single subject or group of subjects and for evidence of ability, scholarship and persistent interest and industry. Candidates wishing to be considered for such honors in a special field must apply to the Dean's Office not later than March 1 of the year of graduation and must submit two typewritten copies of an original thesis prepared in form usual for publication. The written approval of the head of the department in which the work was completed must be attached.

The thesis should include an introduction with references to

HARVARD MEDICAL SCHOOL

relevant literature; a brief statement of the purpose of the study; a description of the materials and methods employed; an account of the original observations included; a discussion of the results; a summary; and a list of the references used.

No candidate is eligible to graduate with honors for a thesis in a special field unless he has done creditable work in his regular curricular studies and has passed the General Examinations. In addition, any candidate whose qualifications are acceptable for honors in a special field must pass an oral examination before the Subcommittee on Honors in a Special Field and invited special examiners in which he will be examined not only on the subject of his thesis but on the general field of which it is a part.

Every candidate for the degree of M.D. must make application for it in writing on blanks furnished at the Dean's Office, on or before April 1.

DOCTOR OF DENTAL MEDICINE

Every candidate for the degree of Doctor of Dental Medicine at Harvard University must be at least twenty-one years of age and of good moral character. He must have fulfilled all the requirements for admission to this school; give evidence of having studied at least two full years in basic health sciences comparable to those offered in the first two years of this school and two years in a recognized dental school, of which one year must be spent in the regular fourth year course of the Harvard School of Dental Medicine. He must have passed all the required examinations and have satisfactorily completed the minimum requirements for work in the various laboratories and clinics.

The degree of Doctor of Dental Medicine *cum laude*, *magna cum laude*, or *summa cum laude* may be given to students of highest general rating in the class, on recommendation of the Committee on Examinations. The degree is also awarded, where appropriate, with honors for a thesis in a special field.

Application for the D.M.D. degree, on a form provided by the Dean's Office, must be filed at that office prior to April 1 in order

DEGREES

for the student's name to be placed on the list of degree candidates at Commencement.

DOCTOR OF MEDICAL SCIENCES

Candidates for this degree must matriculate as medical students and complete with an honor grade the regular elementary courses offered by this School, together with such other subjects as may be recommended by the Faculty. Ordinarily this preparatory training will be equivalent to the first two years of the course of study leading to the degree of M.D. In addition, all candidates are required to have a reading knowledge of French and German. In estimating the amount of a candidate's study for the degree, study completed in other approved medical schools will be considered.

Following the completion of this preliminary training, the student shall devote himself for not less than two years to the intensive study of one of the fundamental medical sciences and to the preparation of a thesis. The thesis must show an original treatment of a fitting subject and give evidence of independent research.

There shall be two examinations for every candidate for this degree: a general examination, before entering upon the work of the last two years, covering the elementary medical sciences; and a final examination, upon acceptance of the thesis, covering the particular medical science chosen as a special field.

HIGHER DEGREES IN THE MEDICAL SCIENCES

The degrees Doctor of Philosophy and Master of Arts are offered for advanced work in some special field in the medical sciences and are administered by the Faculty of Arts and Sciences, through the Division of Medical Sciences, which consists of faculty members of the preclinical departments of the Medical School. All candidates for these degrees are registered in the Graduate School of Arts and Sciences for study in the Division

HARVARD MEDICAL SCHOOL

of Medical Sciences and must hold a degree in Arts or in Sciences from an approved college.

(See section on Division of Medical Sciences on page 39.)

FEES AND EXPENSES

An estimate of total yearly expenses shows that the average cost of the school year is approximately \$3,200 for each academic year. This estimate includes tuition, medical health fee, board and room, books, laundry and incidentals.

The fees are: — For matriculation, \$5; for medical health fee, \$74.00 for each year; for instruction (including laboratory charges except microscope rental, breakage, damage and loss of apparatus), \$1,500 for each year.

Term bills for the year 1963-64 are issued and payable as follows:

<i>Issued</i>	<i>Payable</i>	<i>Basic Charges</i>
At Registration	Presentation	$\left\{ \begin{array}{l} \frac{1}{4} \text{ Tuition for the year} \\ \frac{1}{2} \text{ Medical Health Fee} \end{array} \right.$
Nov. 20	Dec. 10	$\left\{ \begin{array}{l} \frac{1}{4} \text{ Tuition for the year} \\ \text{Board through Oct. 31} \\ \frac{1}{4} \text{ Room Rent for the year} \\ \text{Coupon Books through Oct. 31} \\ \text{Miscellaneous Charges} \end{array} \right.$
Jan. 20	Feb. 10	$\left\{ \begin{array}{l} \frac{1}{4} \text{ Tuition for the year} \\ \frac{1}{2} \text{ Medical Health Fee} \\ \text{Board through Dec. 31} \\ \frac{1}{4} \text{ Room Rent for the year} \\ \text{Coupon Books through Dec. 31} \\ \text{Miscellaneous Charges} \end{array} \right.$
Apr. 20	May 10	$\left\{ \begin{array}{l} \frac{1}{4} \text{ Tuition for the year} \\ \text{Board through March 31} \\ \frac{1}{4} \text{ Room Rent for the year} \\ \text{Coupon Books through March 31} \\ \text{Miscellaneous Charges} \end{array} \right.$

FEES AND EXPENSES

<i>Issued</i>	<i>Payable</i>	<i>Basic Charges</i>
June 5 *	June 15	{ Board to the end of year $\frac{1}{4}$ Room Rent for the year Coupon Books to the end of the year Miscellaneous Charges
June 30	July 15	{ Board to the end of year $\frac{1}{4}$ Room Rent for the year Coupon Books to the end of the year Miscellaneous Charges

* Applies only to candidates for degrees.

A deposit of \$50 is required of every new student who accepts a place in the Medical School; this sum to be applied on his first term bill or to be forfeited if the student does not register.

The term bills are sent to the student at his college address unless the Comptroller is requested in writing to send them elsewhere.

A fee of \$10 is automatically added to all bills which are unpaid by the due date.

Any student whose indebtedness to the University remains unpaid on the date fixed for payment is deprived of the privileges of the University until he is reinstated. Reinstatement is obtained only by consent of the Dean of the Department in which the student is enrolled, after payment of all indebtedness.

As a further condition for reinstatement a student who is delinquent in his financial obligations to the University is required to furnish a bond in the form prescribed by the University in the amount of \$1,000 as security for the payment of his future financial obligations to the University.

Students who are candidates for degrees in the middle of the academic year must pay all dues to the University at least one day before the day upon which the degrees are to be voted.

All indebtedness to the University must be paid by all candidates for degrees at least one day before Commencement.

When a student's connection with the University is severed, all charges against him must be paid at once.

HARVARD MEDICAL SCHOOL

Students will be held responsible for the payment of fees until they have notified the Dean, in writing, of their intention to withdraw from the School.

MICROSCOPES

The School requires that each student secure a standard student microscope, preferably less than twenty years old, with a minimum of two oculars and three objectives including an oil immersion lens. A mechanical stage is not essential. The minimum requirements are as follows:

- 2 oculars 5X and 10X
- 1 oil immersion objective
- 1 16mm. objective
- 1 4mm. objective
- 1 complete substage — Abbe condenser and Iris diaphragm

In addition, the following are recommended by the Department of Pathology:

- 1 scanning objective 2-3X
- 1 quadruple nosepiece

Under the auspices of the Student Faculty Committee, arrangements have been made for the quantity purchase, at a substantial discount, of the standard American, certain German and Japanese microscopes. The standard American and German monocular microscopes currently retail at about \$350, binoculars at about \$550.

Further information about the quantity purchase plan will be sent to each student.

The Medical School has about sixty-five binocular microscopes available for rental each year to first year students unable to provide their own. The rental charge is \$50 a year.

DORMITORY

Vanderbilt Hall, the Medical School dormitory, has accommodations for 305 male and 20 female students. The majority of the rooms are designed for one occupant. Many of the rooms

FEES AND EXPENSES

communicate directly with the adjacent room, and there are also a number of suites for two or more persons. The price of rooms ranges from \$260 to \$505 per person for the academic year. Application forms for rooms in Vanderbilt Hall will be sent to all new students approximately four months before registration day. The date on which they must be returned in order to be included in the drawing will be announced at that time. Students are permitted to reengage their rooms for the following year by signing lease cards at the Dean's Office. The dormitory has squash courts, a tennis court, and a gymnasium which are open to members of the teaching staff and students of the Medical School. There is a parking lot for a limited number of automobiles behind the dormitory. The School assumes no responsibility for loss or damage to automobiles or other property left in the lot. First year students are urged not to bring cars.

DINING HALL

The dormitory contains a large dining hall which is available for all members of the medical area. First year students living in Vanderbilt Hall will be required to pay full board for the academic year, \$620 for 21 meals a week. Second year students living in Vanderbilt Hall will be required to pay full board in the first term but in the second term compulsory meal contracts may be amended to provide for absence from lunch during the three clinic days of each week. A proportionate decrease in the full board rate will be made for the period involved. Students desiring the amended contract should apply to the Dining Hall checker. Graduate students and others living in the Hall will also be required to sign on for the 21 meals a week for their first two years of residence.

STUDENT HEALTH SERVICE

The Medical Area Health Service at the Peter Bent Brigham Hospital, 721 Huntington Avenue, Boston, supplies medical

HARVARD MEDICAL SCHOOL

care to the students. The office is open daily from 8:30 a.m. to 5:00 p.m. except Saturday afternoons, Sundays, and holidays; office hours for the physicians are 8:30 to 10:00 a.m. and 1:00 to 2:00 p.m. However, one of the staff is available during the day by appointment and for emergencies. For emergency care at night and on holidays, the Emergency Service of the Peter Bent Brigham Hospital is open at all times and one of the staff of the Health Service is available by telephone. A complete medical examination of each new student is required at the beginning of the school year. This is conducted by appointment shortly after school opens.

Medical students requiring hospitalization will ordinarily be hospitalized at the Peter Bent Brigham Hospital. Upon registration, each student receives a booklet which describes the medical services available from the Medical Area Health Service. Hospital insurance is available through the plan for wives and children of married students.

Evidence of having been satisfactorily vaccinated is required for entrance to Harvard University and a form for certification which must be filled out is sent to each student who is accepted for admission. Results of a chest film made within six months prior to registration must be reported.

Any illness necessitating absence from classes should be reported to the Health Service.

STUDENT EMPLOYMENT

Only a limited amount of outside work can be done without taxing a student's health and scholarship, and the student is urged, when it is possible, to devote himself to a regular program of study and recreation, giving as little time to outside work as is feasible with his plan for financing his medical education. A limited number of positions offering room and board in return for laboratory or minor clinical services in hospitals are available to second, third, and fourth year students. Few opportunities are open to first year students.

FELLOWSHIPS

FELLOWSHIPS

The Fellowship Funds of the Harvard Medical School are, except where otherwise noted, administered by a Standing Committee of the Faculty. Applications for support from these funds should be sent to the Dean's Office.

EDWARD HICKLING BRADFORD (1918). Anonymous. To be used for medical research or instruction separately or in connection with any other foundation, in such manner as may be prescribed.

JOHN WHITE BROWNE (1918). Mrs. Francis B. Greene. For a young man of unusual promise to pursue research investigation for one year at the Harvard Medical School or elsewhere.

BULLARD (1891). William Story Bullard, in memory of three physicians "distinguished for their honorable personal character and their professional services in this community":

GEORGE CHEYNE SHATTUCK MEMORIAL

JOHN WARE MEMORIAL

CHARLES ELIOT WARE MEMORIAL

Any one or all of these fellowships may be paid to any student or member of the medical profession appointed to make such original investigations in Medical Science as will be most useful to the profession and to the community. The results of these investigations shall not, however, be published as a research performed under the grant of a Bullard Fellowship, unless the work shall have received the approval of the Committee.

Holders of the fellowships must do throughout the academic year the equivalent of at least ten hours' work a week and make a report thereon.

ARTHUR TRACY CABOT (1913). Dr. and Mrs. Frederick Cheever Shattuck. In memory of Arthur Tracy Cabot, A.B. 1872, M.D. 1876. For students of surgery. Ordinarily the incumbent may

HARVARD MEDICAL SCHOOL

not engage in active practice, but is to devote himself to the advancement of surgery in the United States or elsewhere. Nomination to this fellowship is by preference to be made by the Moseley Professor of Surgery.

JAMES JACKSON CABOT (1906). Arthur T. Cabot, Samuel Cabot, and Guy C. Cabot. Income to be used to "aid and encourage practical work in scientific medicine."

WALTER BRADFORD CANNON (1945). Mr. Joseph F. and Mrs. Clara Ford. A fellowship in Physiology.

HENRY A. AND CAMILLUS CHRISTIAN (1956). Henry A. Christian. To be appointed by the Hersey Professor of the Theory and Practice of Physic. The fellowship shall be held preferably by the same individual for a period of five years. The greater part of his time shall be devoted to medical investigation, preferably in the field of clinical medicine.

HAROLD C. ERNST MEMORIAL FUND (1938). Mrs. Ellen L. Ernst. A scholarship or fellowship in the Department of Bacteriology.

CHARLES FOLLEN FOLSOM (1908). Founded by more than sixty persons in memory of Charles Follen Folsom, A.B. 1862, M.D. 1870. A Teaching Fellowship in Hygiene or in Mental and Nervous Diseases. For the present assigned to the Department of Neuropathology-Neurology.

LOUIS W. GILBERT (1943). S. Louise Gilbert. Income to be used for the study of chronic diseases.

SAMUEL JORDAN GRAHAM (1961). E. Norma P. Graham. Fellowship in surgery.

CHARLES DUSTIN HUNKING, M.D. (1948). Sarah S. H. Cheney, in memory of her brother, Charles Dustin Hunking, M.D., a member of the Class of 1871 of Harvard University and of the Class of 1876 of Harvard Medical School. To enable a graduate of Harvard Medical School, who is also a native of Haverhill, Mass., to do medical research.

FELLOWSHIPS

LOUIS E. KIRSTEIN (1937). Friends of Louis E. Kirstein. For the promotion of scientific medical education.

JOHN R. KISSINGER (1911). Harold C. Ernst. For a fellowship or salary of an individual engaged in the investigation of the causation of infectious diseases, preferably in the direction of tropical medicine. Recommendation to this fellowship is made by the Professor of Bacteriology in the Medical School.

WILLIAM O. MOSELEY, JR., TRAVELLING FELLOWSHIPS (1912). Mrs. William O. Moseley. For students who have attended the School for three or four years or, upon recommendation of the Administrative Board in each such case, men who have been two years as undergraduates in the School and who have subsequently for at least a year done, under members of the staff of this School, advanced work of such character and quality as to lead the Administrative Board to believe that they will be of unusual value in their profession. To enable them to continue the study of medicine in Europe. Either two or three fellowships will be awarded.

FRANCIS WELD PEABODY MEMORIAL (1929). To be awarded on the recommendation of the Dean and full professors of Medicine in charge of the clinics of the Boston City Hospital, the Massachusetts General Hospital, and the Peter Bent Brigham Hospital, to properly qualified graduates of medical schools to enable them to devote further time to intensive clinical and laboratory studies.

JEFFREY RICHARDSON (1933). William Lambert Richardson, A.B. 1864, M.D. 1867. To be awarded each year to some deserving student, upon his graduation from the Harvard Medical School, who desires to continue his studies either here or abroad.

HENRY P. WALCOTT (1910). Dr. Frederick Cheever Shattuck. For a Fellow in Clinical Medicine appointed on nomination by the Jackson Professor of Clinical Medicine. The recipient shall not engage in private practice but must devote his time to teaching and clinical research.

HARVARD MEDICAL SCHOOL

WHITMAN (1933). Mrs. Bernard C. Whitman, in memory of her husband Bernard C. Whitman, A.B. 1846, and of her son Crosby C. Whitman, A.B. 1886. Available for a graduate of Harvard Medical School pursuing the study of medicine or surgery at the École de Médecine de Paris.

WYMAN WHITTEMORE (1963). Francis Lee Whittemore. Scholarships in surgery.

WILLIAM HUNTER WORKMAN (1925). William Hunter Workman, M.D. 1873. To enable one or more graduates of the Harvard Medical School to pursue postgraduate studies in medicine in this country or abroad. In exceptional cases, fourth year students will be eligible.

SCHOLARSHIPS

HARVARD MEDICAL SCHOOL NATIONAL SCHOLARSHIPS

In order to make it possible for young men of outstanding ability and promise to come to the Harvard Medical School, two or three Harvard Medical School National Scholarships will be offered to incoming members of the first year class. These scholarships will carry a stipend sufficiently large, if necessary, to meet all the student's essential expenses. Successful applicants who maintain a high honor record at the Medical School will continue to hold these scholarships throughout the Medical School course.

The offer of these scholarships is made possible by gifts from Mr. Edward S. Harkness, Dr. Daniel F. Jones, and Dr. Franklin S. Newell. The donors expressed the hope that through these scholarships superior men who could otherwise not receive a medical education would be enabled to attend the Harvard Medical School. They also expressed the hope that some of these men might wish to return to their own communities to carry on the practice of medicine.

Direct application for these scholarships cannot be made since all accepted first year students are considered as candidates, the

SCHOLARSHIPS

awards being made without reference to financial circumstances. The stipend will vary depending on the resources of the recipient.

GENERAL SCHOLARSHIPS

The following scholarships are open to students who have been admitted to the School at the time of application. Approximately \$95,000 is available annually from the general scholarship funds.

The Cheever, Gerry, Greene, and Haven Scholarships are awarded only to students of the first year class. The Hayden and Webster Scholarships may be so awarded. All the other scholarships are available to members of all classes.

Information concerning all forms of financial assistance may be obtained from the Dean's Office.

AESCLAPIAN CLUB (1938). To be used for loans or scholarships.

VIVIAN B. ALLEN (1954). To provide scholarship aid for men who are unable to pay their own way for medical training.

ANONYMOUS No. 60 (1960). To provide scholarships for students in the Medical School.

EDWARD DANA BARBOUR FUND (1928). For promoting medical education in China, preference to students coming from Shanghai or its environs.

EDWARD M. BARRINGER FUND (1881). Edward M. Barringer. For the maintenance of two scholarships for students in the Harvard Medical School. Awarded to deserving students, preference being given to those of the fourth year class.

EDWARD M. BARRINGER No. 1

EDWARD M. BARRINGER No. 2

GORDON BARTLETT (1919). Mr. and Mrs. Donald Gordon, in memory of their nephew, Gordon Bartlett, a student at Dartmouth College who died of wounds at St. Mihiel while serving in the

HARVARD MEDICAL SCHOOL

Seventeenth Field Artillery. Preference is given to graduates of Dartmouth College. This scholarship will ordinarily be divided between two men.

MATTHEW AND MARY E. BARTLETT (1916). Miss Fannie Bartlett, in memory of Matthew and Mary E. Bartlett. For the benefit of a worthy and meritorious student who is in need of financial assistance.

LUCIUS F. BILLINGS (1900). Lucius F. Billings. May be divided between two or more students.

DR. ROBERT BONNEY FUND (1944). Robert Bonney, M.D. 1898. For the aid of needy and meritorious students.

HENRY FASSETT CASTLE (1941). William E. Castle, A.B. 1893, A.M. 1894, PH.D. 1895, as a memorial to his son, Henry Fassett Castle, who died in November, 1919, at the age of 19, having completed the previous June the work of the first year in the Medical School.

DAVID WILLIAMS CHEEVER (1889). David Williams Cheever, A.B. 1852, M.D. 1858, LL.D. For a first year student after three months' study in the Medical School.

DAVID WILLIAMS CHEEVER #2 (1947). David Cheever, A.B. 1879, M.D. 1901. To be awarded at the beginning of the year to a first year medical student in hope that after the stated probationary period he may be awarded the scholarship founded by David Williams Cheever, A.B. 1852, M.D. 1858.

ELEANOR DWIGHT CLARK (1938). For one or more scholarships of the type of the Harvard National Scholarships.

OWEN COPP (1936). Hattie G. Copp. To assist one or more needy and worthy students.

COTTING GIFT (1900). Benjamin E. Cotting, A.B. 1834, M.D. 1837. Awarded on the basis of pecuniary need, intellectual capacity, faithfulness and earnest endeavor.

SCHOLARSHIPS

MYRON DENTON (1956). Myron P. Denton, in memory of his father.

ORLANDO W. DOE (1893). Orlando Witherspoon Doe, A.B. 1865, M.D. 1869. To be given annually to a deserving student in the Medical department.

GEORGE RUSSELL EAGER (1936). Miss Mabel T. Eager, in memory of her father.

HENRY EHRLICH MEMORIAL (1927). Friends and family of Henry Ehrlich, M.D. 1886. To be used for the assistance of needy and worthy students regardless of creed or color.

RUSSELL DUNSON ELLIOTT (1950). Awarded annually to properly qualified applicants, preferably of Anglo-Saxon ancestry.

HORACE PUTNAM FARNHAM (1918). Mrs. Eliza Cary Farnham in memory of her husband, Dr. Horace Putnam Farnham, A.B. 1843. For the benefit of meritorious students in the Harvard Medical School.

REGINALD FITZ (1954). Scholarships for students in the Harvard Medical School.

DR. E. PEABODY GERRY (1943). The income to aid first year students.

JUDGE AND MRS. SAMUEL JORDAN GRAHAM MEMORIAL (1961). E. Norma P. Graham.

CHARLOTTE GREENE (1925). Edwin Farnham Greene. For a first year student whose previous record indicates special promise.

DR. C. EUGENE GUNTHER (1933). Mrs. C. Eugene Gunther in memory of her husband. To be used to maintain two scholarships for the benefit of deserving medical students.

WILLIAM WAUGH HAGGART (1955). G. Edmund Haggart, M.D. In memory of his brother for scholarships, beneficiary aid or loans.

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EDWARD WARREN HARNDEN (1957). William H. Snyder, Jr. and Monica H. Snyder. For scholarships, loans or other financial aid.

DR. CHARLES HARRINGTON (1959). In memory of Dr. Charles Harrington. Beneficiary aid for deserving students.

GEORGE HAVEN (1913). George Haven, M.D. 1883. To be used annually for scholarships for students of the first year in the Medical School.

LEWIS AND HARRIET HAYDEN (1894). Mrs. Harriet Hayden. For colored students. The income may be divided. If not awarded in the Medical School, the School of Public Health, or the School of Dental Medicine, it is open to colored students in any other department of the University.

ERNEST LAURENCE HILL (1961). ANNETTE S. HILL. In memory of son — to assist medical students from Maine and New Hampshire.

WILLIAM HILTON (1897). Two scholarships annually in the Medical School.

WILLIAM OTIS JOHNSON (1911). Mrs. William O. Johnson, in memory of her husband, William Otis Johnson, A.B. 1845, M.D. 1848.

CLAUDIUS M. JONES (1893). Claudius Marcellus Jones, A.B. 1866, M.D. 1875.

THOMAS HINCKLEY LANMAN (1961). Established by the Harvard Medical Alumni Council.

ALFRED HOSMER LINDER (1895). Mrs. George Linder. For a student of sound principles and marked ability.

ARTHUR THEODORE LYMAN AND HENRY STURGIS GREW MEMORIAL SCHOLARSHIP (1926). On March 19, 1951, it was voted by the Corporation . . . "to provide that such income shall be available, until further order of this board, for scholarships in the

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Medical School, the School of Dental Medicine and the School of Public Health; preference to be given to Chinese students, with the understanding that if none such apply successfully, the income may be used for scholarships for students from elsewhere in the Far East."

MEDICAL SCHOOL CLASS OF 1879 (1909). Established by the Class of 1879 as a loan fund and later converted to a scholarship.

JAMES EWING MEARS, M.D. (1909). J. Ewing Mears. For a student throughout the full course of four years, subject to his scholastic standing and good conduct.

JOHN MORGAN MEMORIAL (1961). The Francis Beidler Charitable Trust. For scholarships or other financial aid for students from the State of Illinois.

ERNEST OMAR NAY (1947). Ernest Omar Nay, M.D. 1919. For a medical student from the states of Indiana, Illinois or Ohio whose scholarship is above the average and whose financial resources are such that he cannot unaided acquire a medical education.

JOSEPH PEARSON OLIVER (1904). Patients of Joseph Pearson Oliver, M.D. 1871. To be awarded to a needy and deserving student of the Medical School.

JOHN ELIOT OVERLANDER (1947). John Eliot Overlander, M.D. 1909. To assist such needy medical students as may be deemed worthy of assistance by the proper authorities.

ALWIN M. PAPPENHEIMER '99 (1957). Beatrice L. Pappenheimer. For the benefit of such graduate students in the fields of medicine or music.

CHARLES B. PORTER (1897). William L. Chase.

JAMES HENRY RAND (1962). Public Health Foundation for Cancer and Blood Pressure Research, Inc. To provide scholarships, loans, or other kinds of beneficial aid for any student who has received his M.D. at Harvard Medical School.

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DR. FLAVIUS SEARLE (1921). Miss Mary L. Searle, in memory of her father, Dr. Flavius Searle. The stipend may be divided.

JOSEPH J. SILBERT (1937). For scholarship or loans to needy students.

ELEANOR B. AND CHANNING S. SIMMONS (1954). Scholarships for two needy students.

FRANCIS SKINNER (1905). Francis Skinner, Esq. To be used in small sums to meet the urgent needs of meritorious students in the payment of term-bills or other expenses.

CHARLES PRATT STRONG (1894). Friends and patients of the late Charles Pratt Strong, A.B. 1876, M.D. 1881.

ISAAC SWEETSER (1892). Mrs. Anne M. Sweetser. To be "devoted to the aid of poor students of ability who would not otherwise be able to continue the studies necessary for their profession."

EDWARD W. AND ELSIE B. TAYLOR (1961). Katherine B. Taylor. For financial aid to students.

JOHN THOMSON TAYLOR (1899). Mrs. Frederic D. Philips, in memory of her brother, John Thomson Taylor. To be paid to some meritorious undergraduate of the Medical School without regard to his pecuniary circumstances.

MARY THACHER (1956). Mary Thacher. To be applied against the tuition of needy students preferably from first, Yarmouth, Massachusetts, secondly from the Cape Cod region of Massachusetts, and thirdly from Massachusetts.

JAMES ROCKWELL TORBERT (1958). Elizabeth T. Torbert. In memory of her husband James Rockwell Torbert, H.M.S. 1902.

WALKER SCHOLARSHIPS (1922). Miss Leslie Walton Walker, four scholarships.

DR. CHARLES WALKER

HELEN L. WALKER

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ANNA G. WALKER

LESLIE W. WALKER

RICHARD H. WALLACE (1960). The family and friends of Richard H. Wallace, H.M.S. 1927.

ABRAHAM A. WATSON (1923). Miss Catherine E. Walker. For the benefit of students in the Medical School.

MAJOR HARRISON BRIGGS WEBSTER, U.S.A. MEMORIAL (1921). Gift of L. Florence Webster in memory of her son, Class of 1905, to sons of members of that class or to a needy student in the Medical School.

CHARLES H. WEED MEMORIAL (1961). Friends, students and patients of Dr. Weed. For scholarship or other financial aid to students.

EDWARD WIGGLESWORTH (1897). The family of Edward Wigglesworth, A.B. 1861, M.D. 1865.

JAMES F. AND HELENA C. M. WILLIS (1961). Helena C. M. Willis. For a student who is a native of Boston.

GEORGE BERNAYS WISLOCKI (1957). The family and friends of Dr. Wislocki. For one or more graduates or medical students who show unusual promise in some area of the basic medical sciences.

PAUL RICHMOND WITHINGTON, JR. (1960). The family and friends of Paul Richmond Withington, Jr.

S. BURT WOLBACH (1955). Dr. and Mrs. Robert E. Gross.

SCHOOL OF DENTAL MEDICINE SCHOLARSHIPS

As part of the Harvard National Scholarship plan, prize scholarships are awarded to one or more members of each class entering the Harvard School of Dental Medicine. The selection of recipients is based on academic promise without reference to

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financial need. The amount of the stipend, however, is in proportion to the student's actual necessities, except that a certain minimum award is granted to all prize scholars. In the event that a prize scholar has need of it, the amount of the award will be sufficient to cover his tuition in the School of Dental Medicine. Each student accepted by the Committee on Admission is considered as a candidate for a National Scholarship. *An individual application cannot be made.* The prize scholarship is awarded for one year. If the student maintains a satisfactory record, the scholarship will be renewed annually.

In addition to the National Scholarship, a limited number of scholarships are available to students enrolled in the School of Dental Medicine. These scholarships are awarded on the basis of academic excellence, financial need or a combination of these factors.

JOANNA ALFORD BEQUEST (1785). Mrs. Joanna Alford. To be used for scholarships for those students who are under low and indigent circumstances.

LAWRENCE WILLS BAKER MEMORIAL FUND (1956). The gift of friends in memory of Dr. Baker, Professor of Orthodontia.

DWIGHT M. CLAPP (1926). Clara Josephine Clapp in memory of her husband, Dwight M. Clapp, D.M.D. 1882. For the education of a male student born in Massachusetts, preferably one who has a college education or training of a classical character.

DENTAL SCHOOL ALUMNI SCHOLARSHIP (1937). A gift of the Class of 1912.

THOMAS ALEXANDER FORSYTH (1929). Thomas Alexander Forsyth scholarship to two deserving men, awarded continuously until they have completed the course.

HARVARD DENTAL ALUMNI (1949). Selection of a candidate shall be based upon character, scholarship, and promise within the field of dentistry. The award may be offered as a scholarship to an undergraduate student of the third or fourth year or as a fellowship for graduate work.

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EUGENE HANES SMITH (1920). Alumni Association. To be awarded to a third or fourth year student who has been a student in regular standing during the first and second years.

PETER E. STRAUSS (1922). Emily R. M. Strauss. In memory of her husband.

FELLOWSHIPS AND SCHOLARSHIPS AVAILABLE IN OTHER DEPARTMENTS OF THE UNIVERSITY AS WELL AS IN THE MEDICAL SCHOOL AND SCHOOL OF DENTAL MEDICINE

The fellowships, scholarships and loans listed below which are marked with an asterisk (*) give preference to, or are restricted to, students who come within the special terms set forth. Unless otherwise stated, applications should be made, before *February 20*, to the Deans of the Medical School and School of Dental Medicine.

*JOHN AUSTIN AMORY, CLASS OF 1907, SCHOLARSHIP FUND (1954). Gift of Roger Amory, Class of 1910, to establish "the John Austin Amory, Class of 1907, Scholarship Fund to provide one or more scholarships for candidates for a degree in any college or graduate school of the University." Under certain conditions a grandson by male line of John Austin Amory, '07, may be entitled to the income. If no awards are made to preferential candidates, the income shall be assigned to the College Admission and Scholarship Committee.

ANONYMOUS No. 55 (1952). Anonymous gift "to provide one or more scholarships or beneficiary grants to graduates or undergraduates in Harvard University. These awards shall be based on need and character and not scholarship alone."

ANONYMOUS No. 63 (1961). Anonymous gift "to provide an endowment fund, the income to be used for scholarships to graduates or undergraduates in Harvard University or Radcliffe."

HATTIE G. ATKINS BEQUEST (1961). Residuary bequest of Hattie G. Atkins in memory of her ancestor, Matthew Gannett,

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the income to be used for not more than two graduate or undergraduate scholarships.

EDWARD AUSTIN BEQUEST (1899). For fellowships or scholarships in any department of the University.

JASON S. BAILEY FUND (1952). Residuary bequest of Jason S. Bailey. For scholarships in any department of the University.

FRANK B. BAIRD, JR. FUND (1955). Gift of the Frank B. Baird, Jr. Foundation, to establish the Frank B. Baird, Jr. Scholarship. Income assigned to the Graduate School of Education.

ELLEN S. BATES FUND (1929). Residuary bequest of Ellen S. Bates. For scholarships to deserving students in any department of the University. To be awarded every third year, with the next award to be made in 1964.

*BAXENDALE SCHOLARSHIP (1928). Bequest of Esther M. Baxendale. Preference: (1) descendants of Alan Bedford Hudson; (2) students of the name of Baxendale or Hudson; (3) students from Brockton, Mass., or Bourne, Mass. Birth certificate and genealogical record required of (1).

*BRIGHT LEGACY (1880). Bequest of Jonathan Brown Bright. For descendants of Henry Bright, Jr., of Watertown, Mass., who bear the name of Bright, registered in any department of the University. If no awards are made to preferential candidates, the income shall be assigned to the College Admission and Scholarship Committee. Birth certificate and genealogical record required to establish special claim.

*DANIEL A. BUCKLEY BEQUEST (1905). Bequest of Daniel A. Buckley of Cambridge, Mass. For needy and worthy graduates of Latin, High and other public non-sectarian schools in Cambridge enrolled in any department of the University. Awards to undergraduates will be made by the College Admission and Scholarship Committee.

*GODFREY L. CABOT, INC. SCHOLARSHIP FUND (1955). For schol-

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arships and grants of "aid" to students enrolled in any department of the University. A son of an employee of Godfrey L. Cabot, Inc. or of its subsidiary and associated companies, who applies for aid or a scholarship, may be preferred in the awards from this fund.

JAMES EMERSON CARPENTER FUND (1963). Residuary bequest of Emmie L. Carpenter "to be devoted annually for deserving and needy students." A portion of this fund has been set aside for use by the University Health Services at the discretion of the Director to assist needy and worthy students meet unusual medical costs.

*MADAME MARGUERITE CARRIERE FELLOWSHIP FUND (1959). Residuary bequest of Louis A. Freedman in memory of his wife. The fellowship is to be awarded in alternate years to a graduate student at Harvard University for study in France and to a French graduate student for study at Harvard University. It is hoped that the aim of the American student in France will be to study the French traditions and attitude so as to better understand and explain the French reaction to the problems that concern both countries and that similar aim will guide the French student in America. In 1964-65 this award will be available to a French graduate student for study at Harvard University.

*VICTOR EMMANUEL CHAPMAN MEMORIAL FELLOWSHIP (1917). Several donors. In memory of Victor Emmanuel Chapman, A.B. 1913, killed in World War I. For a French youth (or youths) for study in any department of the University. Apply through the Institute of International Education, 800 Second Avenue, New York, New York 10017, *before February 1*. Students already enrolled at Harvard should apply through their Schools.

*JOSEPH HODGES CHOATE MEMORIAL FELLOWSHIP (1919). Gift of the Harvard Club of New York City in memory of Ambassador Joseph Hodges Choate, A.B. 1852. Awarded upon the nomination of the Vice-Chancellor of the University of Cambridge, England, to a British subject coming from that University to study in any department of Harvard University.

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*GEORGE CHASE CHRISTIAN MEMORIAL SCHOLARSHIPS (1936). Gift of Carolyn McKnight Christian in memory of her husband, George Chase Christian, A.B. 1895. To be awarded as National Scholarships to residents of Minnesota, for study in any department of the University, preferably the graduate schools.

*MARK D. CORY SCHOLARSHIP (1954). Residuary bequest of Mark D. Cory. To be awarded to a worthy graduate of the Gadsden High School, Gadsden, Alabama to be selected and designated by the faculty of said high school. Available for students in any department of the University. Administered by the College Admission and Scholarship Committee.

*MYER DANA AND ETTA DANA SCHOLARSHIP FUND (1953). Gift of Etta (Mrs. Myer) Dana. To provide scholarships or beneficiary aid to needy and deserving students in the College, Law School, or Medical School. Awards are made upon the recommendation of the Deans of these Schools and *not* upon application.

*CHARLES DOWNER SCHOLARSHIP FUND (1927). Bequest of Charles Downer, A.B. 1889, LL.B. 1892. For students in any department of the University in the following order of preference:

- A. Students of "English or Anglo-Saxon stock" who bear the family surname of Downer by right of birth or inheritance, and not because of adoption, preference to be given to such students who are descendants of Joseph and Robert Downer, of Wiltshire, England, who came to America about 1650. Scholarship awards under this category will be sufficient to pay for tuition, books, food, room and other incidentals in any academic year.
- B. Descendants of members of the Harvard College Class of 1889 who are in need of assistance.
- C. Residents of the State of Vermont, preference to be given to those most worthy of assistance.
- D. Students worthy of assistance and of high scholarship, preference to be given to (1) Descendants of graduates of Harvard

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College, and (2) Those "of that old Anglo-Saxon stock which has gone forth from New England into all parts of the United States and has been the means of giving strength and stability and character to our government."

Or, any balance of income remaining after the award of scholarships as specified in paragraphs A, B and C above may be used for fellowships for Harvard graduates of high scholarship and of rare and unusual ability who are pursuing special work either at Harvard or at any American or foreign university or school.

*DWIGHT D. EISENHOWER SCHOLARSHIP FUND (1962). Gift of William A. Hinton in memory of Augustus and Maria Hinton, "the income to be used to assist graduate students in any department by way of scholarship grants, prizes for scholarly treatises or other achievements, or otherwise."

JOSEPH EVELETH BEQUEST (1896). For needy and worthy students in any department of the University.

BRADLEY FISK SCHOLARSHIP (1963). Gift in memory of Bradley Fisk, the income to be used "to provide one or more scholarships or other forms of financial aid to students in Harvard University."

*THOMAS HOOKER FLINT MEMORIAL SCHOLARSHIP (1957). Established by the friends and family of Thomas Hooker Flint, Harvard College Class of 1958, who died in 1957 in a climbing accident on Mount Madison, in the White Mountains, New Hampshire. The scholarship may be awarded either to students in Harvard College or Harvard Medical School, with preference for graduates of the Belmont Hill School. Thomas Flint was born in Concord, Mass., April 22, 1936, attended Belmont Hill School, and entered Harvard College in the Class of 1958 as an Honorary National Scholar, and hoped to attend Harvard Medical School. The scholarship is established in the conviction that those who benefit from it will fulfill the promise of his short life, as expressed in the closing words of a prayer known to have been Thomas Flint's guide in life: "Help us to make the life of our

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youth as lovely as the world in which it lives; the brotherliness of humanity equal to the beauty of nature."

FRANCIS LEE FRIEDMAN FUND (1962). Gift of the O-F Foundation, Inc., the income to be used "for scholarships in Physics for undergraduate or graduate students." One third of the income is to be used for scholarships to undergraduates and two-thirds of the income is to be used for scholarships in the Graduate School of Arts and Sciences. Awards are made upon the recommendation of the Chairman of the Physics Department and not upon application.

GAGE SCHOLARSHIP (1948). Bequest of Homer Gage, A.B. 1882, M.D. 1887. In memory of Thomas H. Gage, M.D. 1852, Homer Gage, 1882, Thomas H. Gage, Jr., 1886, and Homer Gage, Jr., 1918. For students registered in any department of the University.

*JEAN GAILLARD MEMORIAL FELLOWSHIP (1946). Established in memory of Jean Gaillard, a student of the Ecole Centrale des Arts et Manufactures in Paris, who served as an Aspirant in the French Air Forces, was arrested by the German Gestapo, and died in the German concentration camp at Ravensbrueck April 16, 1945, a victim of Nazi inhumanity. For French youths for study in any department of Harvard University or of the Massachusetts Institute of Technology. The incumbents from year to year are to be nominated by the Board of Directors of the Ecole Centrale des Arts et Manufactures in Paris.

JOHN TYLER HASSAM MEMORIAL SCHOLARSHIP (1941). Bequest of Eleanor Hassam in memory of her father, John Tyler Hassam, A.B. 1863. For students registered in any department of the University.

*LEWIS AND HARRIET HAYDEN SCHOLARSHIP FOR COLORED STUDENTS (1894). Residuary bequest of Mrs. Harriet Hayden. For needy and worthy colored students in the Medical School, School of Public Health and Dental School; or, if not awarded in these

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Schools, in any department of the University. Administered by the Medical School.

NATHAN HAYWARD MEMORIAL SCHOLARSHIP FUND (1956). Gift of Anna S. (Mrs. Nathan) Hayward in memory of her husband. For Nathan Hayward Scholarships or aid to students in any department of the University.

*CHARLES W. HOLTZER FELLOWSHIPS (1929). Bequest of Charles W. Holtzer. For young men of German birth who have received their preliminary education in German institutions of learning, to study in any department of the University. Preference is given to students in Germany at the time of application. Students in Germany may apply either through the Deutscher Akademischer Austauschdienst, Nassestrasse 11, Bonn, or the Institute of International Education, 800 Second Avenue, New York, New York 10017, *before February 1*. Students enrolled at Harvard should apply through their Schools. Documentary proof of German birth and education required.

EDWARD WILLIAM HOOPER MEMORIAL (1905). The gift of friends of Edward W. Hooper, A.B., 1859, LL.B. 1861. For one or more fellowships in any department of the University.

CHARLES LLOYD HUFF SCHOLARSHIP FUND (1949). Residuary bequest of Anna Elizabeth (Mrs. Charles Lloyd) Huff, in memory of Charles Lloyd Huff, A.B. 1913. Income assigned to the College Admission and Scholarship Committee.

SINCLAIR KENNEDY FUND (1948). Gift of Mrs. Rae B. Kennedy in memory of her husband, Sinclair Kennedy, A.B. 1897, LL.B. 1906. For grants to students enrolled in any of the graduate departments of the University for travel and residence outside the United States. "This fund to provide grants for travel is created in the belief that an opportunity to observe and to compare, to seek meanings and reasons, may enlarge the understanding of the traveller and, through him, be of general value." Not open to competition by undergraduates, including graduating seniors, in

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the College. Recommendations for Kennedy Fellowships are made *on behalf* of students by the Deans or Chairmen of the Departments in which the student is registered. In addition, at least two letters of recommendation from the student's instructors, and a somewhat detailed statement of purpose written by the candidate, must be submitted on his behalf. All material is then forwarded to the General Scholarship Committee Office, 906 Holyoke Center, Cambridge, *before February 1*.

*FRANK KNOX MEMORIAL (1946). Gift of Annie Reed Knox in memory of her husband, Col. Frank Knox, LL.D. (Hon.) 1942, Secretary of the Navy, 1940-44. "It is my hope that this fund . . . will play a part in an integrated program of exchange fellowships throughout the world. The Frank Knox Memorial is established because of the firm belief of my dear husband, a conviction which I share, that cooperation between the British Commonwealth and the United States of America, based upon an informed and understanding contact of the peoples of these two great countries, is an essential to international peace." Candidates shall be selected on the basis of future promise of leadership, strength of character, keen mind, a balanced judgment and a devotion to the democratic ideal. Fellowships are to be awarded annually to:

1. Students coming from the following British Commonwealth countries: the United Kingdom, Australia, New Zealand, Canada and Newfoundland. Students should apply through their university *before November 1* of the year preceding award.
2. Recent graduates of Harvard College, or students who have completed at least one year of study in one of the Harvard graduate schools, for study in any one of the countries listed above.

Procedure for graduate students for travel grants only. Recommendations for Knox Fellowships are made on behalf of students by the Deans or Chairmen of the Departments in which the student is registered. In addition, at least two letters

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of recommendation from the student's instructors, and a somewhat detailed statement of purpose written by the candidate, must be submitted on his behalf. All material is then forwarded to the General Scholarship Committee Office, 906 Holyoke Center, Cambridge, *before February 1*.

Procedure for College students (graduating seniors only) for travel grants only. Recommendations for Knox Fellowships are made on behalf of students by their Department Chairmen and House Masters or Senior Tutors. Application material is due *March 1* in the Office of the Dean of the College, 4 University Hall, Cambridge. Nominees are selected by informal interviewing committees.

*ARTHUR LEHMAN FUND (1936). Gift of Adele L. (Mrs. Arthur) Lehman and her daughters and sons-in-law, Mr. and Mrs. Richard J. Bernhard, Mr. and Mrs. Benjamin J. Bittenwieser and Mr. and Mrs. John L. Loeb, in memory of Arthur Lehman, A.B. 1894. For Arthur Lehman Fellowships to be awarded along the general lines of the Harvard National Scholarship Plan. For students of exceptional merit and promise in the graduate and professional schools only of the University, preference to be given to the following: Graduate School of Arts and Sciences, Graduate School of Design, Graduate School of Education, Medical School, and Graduate School of Public Administration.

HORACE LOUIS LEITER MEMORIAL SCHOLARSHIP (1955). Bequest of Marietta D. Leiter in memory of her husband, Dr. Horace Louis Leiter, A.B. 1899. For deserving students in any department of the University.

GEORGE VASMER LEVERETT SCHOLARSHIP (1958). Residuary bequest of George Vasmer Leverett of the Class of 1867. To "establish new scholarships or fellowships."

*LINCOLN SCHOLARSHIP (1876). Residuary bequest of Miss Levina Hoar. Preference for needy and worthy students from Lincoln, Mass. If there are no such applicants, the income is assigned to

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the College Admission and Scholarship Committee for award to undergraduates.

CHARLES R. LOWELL AND ANNA L. LOWELL SCHOLARSHIP (1949). Residuary bequest of Anna L. (Mrs. Henry E.) Woodbury for the establishment of two scholarships, to be known as "The Charles R. Lowell and Anna L. Lowell Scholarship" and "The James J. Lowell and Anna L. Woodbury Scholarship" for "worthy, deserving and indigent young men who may be shown to be unable to pay their tuition." Available for award in any department of the University. Income assigned to the College Admission and Scholarship Committee.

JAMES J. LOWELL AND ANNA L. WOODBURY SCHOLARSHIP (1949). Residuary bequest of Anna L. (Mrs. Henry E.) Woodbury, *see above*. Income assigned to the College Admission and Scholarship Committee.

FRANCES E. MARKOE RESIDUARY BEQUEST (1944). Residuary bequest of Frances E. (Mrs. Harry) Markoe for the establishment of scholarships for students in any department of the University.

*ALWIN M. PAPPENHEIMER '99 FUND (1957). Bequest of Beatrice L. (Mrs. Alwin M.) Pappenheimer, in memory of her husband; "the income therefrom to be used for any kind of financial assistance, whether for tuition, books, necessary maintenance and support or otherwise, to graduate students in the College or in any graduate school of the University, suggesting, but not binding the President and Fellows of Harvard College hereby, that the said income be preferably used for the benefit of such graduate students in the fields of medicine or music." The income is allocated equally between the Medical School and Graduate School of Arts and Sciences. Awards made by the scholarship committees of those schools.

JOHN PARKER BEQUEST (1873). Bequest of John Parker for fellowships to further the scientific education either abroad or in the United States (including Harvard University) of exceptionally talented graduate students devoting themselves to the study of

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one of the natural sciences. Not open to competition by undergraduates, including graduating seniors, in the College. Candidates from the following areas are considered: Divisions of Engineering and Applied Physics (if candidate's field is concerned with a natural science), Geological Sciences and Medical Sciences; Departments of Astronomy, Biology, Chemistry and Physics. Recommendations for Parker Fellowships are made *on behalf* of students by the Chairmen of the Divisions and Departments listed above. In addition, at least two letters of recommendation from the student's instructors, and a somewhat detailed statement of purpose written by the candidate, must be submitted on his behalf. All material is then forwarded to the General Scholarship Committee Office, 906 Holyoke Center, Cambridge, *before February 1*.

*FREDERICK E. PARLIN FUND (1928). Bequest of Albert Norton Parlin. For needy and worthy students in any department of the University, preference to be given to natives of Malden or Everett, Mass. Evidence that applicant is a native of either Malden or Everett should accompany application of student seeking to establish preferential claim.

*WILLIAM PENNOYER BEQUEST (1670). Bequest of William Pennoyer of England, for two fellows and two scholars; one preferably to be a descendant of Robert Pennoyer (a brother of William) and the other . . . [from] . . . New Haven [Colony]. Preference to be given to undergraduate descendants. Pennoyer descendants in the graduate schools may apply for the Pennoyer Scholarship by filing such application directly with the College Admission and Scholarship Committee. Certified genealogical records required to establish claim.

*ARISTIDES EVANGELUS PHOUTRIDES MEMORIAL (1925). Gift of friends of Aristides Evangelus Phoutrides, A.B. 1911, Ph.D. 1915, to provide a scholarship in his memory for a student of Greek birth or of Greek parentage in any department of the University. Documentary evidence of Greek birth or parentage required of applicants.

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*PRINCETON FELLOWSHIP (1910). Gift of Cleveland H. Dodge. To be awarded to a graduate of Princeton University, for his first year of study only, in one of the graduate departments of Harvard University. Applications should be made to the Dean of the Graduate School of Princeton University *before January 20*.

*LEON W. REDPATH SCHOLARSHIP (1938). Bequest of Eliza Allen (Mrs. Ellis W.) Redpath in memory of her son Leon W. Redpath, A.B. 1898. For deserving students from the State of Ohio, registered in any department of the University, with preference to residents of Stark and Tuscarawas Counties.

*FRANKLIN REYNOLDS FUND (1925). Residuary bequest of John F. Reynolds. For students in any department of Harvard University and Radcliffe College who are natives of Marblehead, Mass. Application should be accompanied by evidence that applicant is a native of Marblehead.

*JAMES A. RUMRILL SCHOLARSHIPS (1909). Gift of Anna Chapin (Mrs. James A.) Rumrill in memory of her husband James Augustus Rumrill, A.B. 1859, to establish three scholarships, two of which are available to graduates of secondary schools in Virginia, North and South Carolina, Florida, Georgia, Tennessee and Kentucky, for their *first* year of residence as undergraduates in Harvard College. The third scholarship is for a graduate of a college or university in any of the above-named states for study in his *first* year of residence in any graduate department of Harvard University. These scholarships are not renewable. In the absence of properly qualified candidates from the above-named states, the scholarships may be thrown into general competition, as two undergraduate scholarships and one graduate scholarship. Entering students in the College apply to the College Admission and Scholarship Committee; entering students in the graduate departments apply through the Deans' Offices of their Schools.

ARTHUR SACHS SCHOLARSHIP AND FINANCIAL AID FUND (1958). Gift of Arthur Sachs, Class of 1901, of Paris. "To make an en-

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during contribution to the relations between the two countries (the United States and France), by enabling an increasing number of the most deserving and able students in France to study in the United States." The income of this fund will "provide financial assistance for French students enrolled or to be enrolled" in Harvard University. Nominations are made by the Sachs Scholarship Committee in Paris. Inquiries from French students should be addressed to Cultural Attaché, United States Information Service, 4 avenue Gabriel, Paris 8^e, France.

*PETER BROOKS SALTONSTALL '43 MEMORIAL (1947). Gift of the family of Peter Brooks Saltonstall, 1943, who was killed in action on the Island of Guam on August 13, 1944. Peter B. Saltonstall was the son of Leverett Saltonstall, A.B. 1914, LL.B. 1917, United States Senator from Massachusetts and formerly Governor of Massachusetts. To further the education, the health and welfare of the peoples inhabiting the Hawaiian Islands and those islands west of Hawaii, including New Zealand, the Fiji Islands and Australia and also Japan, South Korea, Hong Kong, Formosa, the Philippine Islands, Vietnam, the East Indies, Indonesian Islands, Sumatra and Thailand. The first preference is that the income of this fund be used for scholarships or fellowships to assist worthy students from the above-named Pacific regions to gain a better education at Harvard University. The stipend shall be set to supplement the holder's income sufficiently to defray all his basic expenses of tuition, board and room, and in certain instances some travel allowance may be included. Students may apply directly to Harvard or through the Institute of International Education, 800 Second Avenue, New York, New York 10017, *before February 1*. Students already enrolled at Harvard should apply through their Schools.

In the event that no suitable candidate for the scholarship appears, the unexpended income and its accumulation shall be available for the support of research to better the living conditions or the general well-being of the peoples in the Pacific region described above, such research grants to be made by vote of the

HARVARD MEDICAL SCHOOL

Corporation on the recommendation of the Dean of the Faculty of Arts and Sciences.

CHARLES N. SHAW FUND (1960). Bequest of Charles Nason Shaw. For the support of needy and deserving students in any department of the University.

FREDERICK SHELDON FUND (1909). Residuary bequest of Amey Richmond (Mrs. Frederick) Sheldon, in memory of her husband. The income of this Fund is "to be applied . . . to the further education of students of promise and standing in the University by providing them with facilities for further education by travel after graduation or by establishing travelling scholarships."

Every holder of a Sheldon Fellowship, or Sheldon Prize Fellowship, must be a member of the University at the time of his appointment and must hold a Harvard degree, or be a candidate for a degree in June of the year of appointment.

Procedure for graduate students. Recommendations for Sheldon Fellowships are made *on behalf* of students by the Deans or Chairmen of the Departments in which the student is registered. In addition, at least two letters of recommendation from the student's instructors, and a somewhat detailed statement of purpose written by the candidate, must be submitted on his behalf. All material is then forwarded to the General Scholarship Committee Office, 906 Holyoke Center, Cambridge, *before February 1*. Holders may enroll at universities in this country — outside Harvard University — or abroad, for purposes of formal study or research, or they may engage in travel, or they may combine travel and study.

*ERNEST FREDERICK SLATER SCHOLARSHIP (1955). Bequest of Ernest F. Slater. The income to be awarded as scholarships in any department of the University to deserving (financially or otherwise) young men who are residents of (a) the City of Orangeburg, South Carolina; (b) the State of South Carolina; preference to be given to descendants by birth or adoption of Edward Frederick Slater, father of the donor, regardless of their residence. Not open to students in their first year at the University.

SCHOLARSHIPS

*CHARLES H. SMITH BEQUEST (1947). Residuary bequest of Charles H. Smith. For awards to students in any department of the University according to the following order of preference:

1. a. Graduates of public high schools in Providence, Rhode Island, who are of scholarship rank.
b. Graduates of public high schools in Providence, Rhode Island, who are below scholarship rank but who are considered eligible for financial aid.
2. Graduates of other (non-public) secondary schools in Providence, Rhode Island, who are of scholarship rank.
3. Any residents of Rhode Island not indicated above who are of scholarship rank.

CHARLES HAROLD STANTON SCHOLARSHIP (1963). Bequest of Katharine Stanton "the income only to be used to provide a scholarship in memory of my nephew."

*WILLIAM STOUGHTON BEQUEST (1701). Bequest of Lieutenant Governor William Stoughton, A.B. 1650. For awards to students in any department of the University according to the following order of preference: (a) Residents of Dorchester or Mattapan, Mass.; (b) Residents of Milton, Mass.; (c) Any needy and deserving students.

JOHN E. THAYER SCHOLARSHIPS (1857). Bequest of John E. Thayer, the income to be paid "to the ten most meritorious scholars in Harvard University in Cambridge every year . . . the income shall only be paid to such meritorious scholars as who may actually need the same."

*AUGUSTUS CLIFFORD TOWER FELLOWSHIP FUND (1927). Gift of Louise G. (Mrs. Augustus Clifford) Tower for two fellowships to be awarded annually to:

1. A graduate of Harvard College who may be either a graduating senior or a student enrolled in one of the graduate departments of the University, for study in a French university, preference to be given to a student of Anglo-Saxon descent. Graduating

HARVARD MEDICAL SCHOOL

seniors should consult their Department Chairmen, House Masters, or Senior Tutors with regard to the application procedure. Graduate students should consult their Deans or Department Chairmen. Nomination, on the basis of application material and interview, is made by a special selection committee to the Committee on General Scholarships.

2. A French student for study in any graduate department of Harvard University. French students should apply through the Directeur, École Normale Supérieure, 45 rue d'Ulm, Paris V^e, France, *early in January*.

In addition to the above fellowships, a sum from the Tower Fund is set aside annually for a travel grant to either a graduating senior or a student enrolled in one of the graduate departments of the University, who is nominated by a special selection committee to attend the École Normale Supérieure in Paris, on a fellowship provided by the French Government. Candidates should be United States citizens. For application procedure see paragraph 1 above.

UNIVERSITY GENERAL SCHOLARSHIP FUND (1951). Established by the President and Fellows of Harvard College. For scholarships to students in any School or department of Harvard University.

*THOMAS E. UPHAM CLASS OF 1868 FUND (1939). Bequest of Marcella B. Upham. May be granted annually to worthy graduates of Harvard College in any department of the University who are "preparing to serve our country in public offices of trust and responsibility in the gift of the people, students of American parentage descended from the early settlers to be chosen in preference to others, provided they are equally worthy of assistance."

* VARIELL SCHOLARSHIP (1961). Bequest of Katharine S. Variell in memory of Montfort Schley Variell, the income to be used for music students particularly interested in the piano. Awards are made upon the recommendation of the Chairman of the Music Department and not upon application.

SCHOLARSHIPS

*ANNA VAUGHN FOUNDATION (1935). Residuary bequest of John Vaughn, A.B. 1879. For "meritorious students of Harvard University who are pursuing studies in any biological science."

EMANUEL L. VERVEER BEQUEST (1963). Bequest of Emanuel L. Verveer, S.B. 1898, "the income only to be used to aid financially deserving students, irrespective of race, creed or color."

SARAH L. VIEHMANN SCHOLARSHIP (1936). Gift of Henry Bluestone, A.B. 1906, in memory of his mother, Sarah L. Viehmann. For deserving students in the College or graduate departments of the University.

THE BENJAMIN WEAVER FUND (1961). Residuary bequest of Wealthy M. Weaver in memory of her son Benjamin Weaver, A.B. 1889, the income to be used for scholarships to students in any department of the University.

*JENS AUBREY WESTENGARD FUND (1954). Bequest of Rebecca Aubrey Westengard. "The income is to be applied . . . to the further education of students of promise and standing in any department of the University by providing them with facilities for further education in Europe, Britain, or South America, by travel or study, or to the further education of students of promise and standing in any of those countries, by providing them with facilities for further education by travel and study in this country, preferably by study in some department of Harvard University." Students enrolled in, or expecting to enroll in, the Law School should ordinarily apply for the Jens Iverson Westengard Fund administered by that School.

JAMES K. WHITEMORE FUND (1963). Residuary Bequest of Francis Lee Friedman "the income only is to be used to provide one or more scholarships in Mathematics for undergraduates in Harvard College and students in the Graduate School of Arts and Sciences." One third of the income is to be used for scholarships to undergraduates and two thirds of the income is to be used for scholarships in the Graduate School of Arts and Sciences.

HARVARD MEDICAL SCHOOL

Awards are made upon recommendation of the Chairman of the Mathematics Department and not upon application.

*1902 WORLD WAR MEMORIAL SCHOLARSHIP (1923). Gift of the Class of 1902 in memory of their classmates, André Chéronnet-Champollion, Edward Ball Cole and Elbert Walker Shirk, and to be awarded by preference to: (1) deserving sons of 1902 men killed in World War I; (2) deserving descendants of members of the Class of 1902. Open to students in any department of the University, with preference to undergraduates. If no awards are made to preferential candidates, the income shall be assigned to the College Admission and Scholarship Committee.

*JEFFRIES WYMAN SCHOLARSHIPS (1924). Bequest of Mary Wyman Davis in the name of Susan Wyman and Mary Wyman Davis. For one or more students in any graduate department of the University "who may have given promise of success in some branch of Biological Research," preference to be given to students of anatomy. Nominations are made before *March 1* to the Committee on General Scholarships by a committee consisting of the Hersey Professor of Anatomy, the James Stillman Professor of Comparative Anatomy and the Director of the Museum of Comparative Zoölogy.

LOAN FUNDS

Loan funds are available in the Medical School to which students who are in need of money may make application.

Loans are usually made to meet term bills and cash is provided rarely. Short term loans, for a period of less than six months, are available under special circumstances. In case of unforeseen emergency, loans may be made at any time.

Ordinarily, loans are made at an interest rate of 1% per year, chargeable on the first of July and continuing at this rate until the July 1st subsequent to the completion of three years following a borrower's graduation from the School. Thereafter, interest

LOAN FUNDS

at the rate of $4\frac{1}{2}\%$ per year is charged annually on July 1st on outstanding loans.

In cases where the student borrower, for any reason, leaves the School prior to graduation, interest at the rate of 1% will be charged from the date of the loan until the date of separation from the School, and interest at the rate of $4\frac{1}{2}\%$ will be charged thereafter.

Notes are payable at any time but become due on July 1st five years after graduation.

Application should be made to the Associate Dean for Student Affairs.

MEDICAL SCHOOL

FRANK W. AND CARL S. ADAMS MEMORIAL LOAN FUND (1955). Established by the Charles E. and Caroline J. Adams Trust as a revolving loan fund.

DEXTER FUND (1963). An anonymous gift to provide loans for any qualified student engaged in studies under the academic jurisdiction of the Faculty of Medicine.

DAVID L. EDSALL REVOLVING LOAN FUND (1928). Dr. Frederick C. Shattuck established this fund by gift of \$100,000 to be used as a revolving loan fund.

CHARLES WILLIAM ELIOT LOAN FUND (1924). Given anonymously in honor of President Eliot. Principal and interest to be used for loans to students in the Medical School.

HARVARD MEDICAL SCHOOL LOAN (1954).

HARVARD WAR LOAN (1920).

HARRIET P. KEITH LOAN (1921).

GEORGE B. AND LOUISE KERPER FUND (1956). Established by Edmund Kerper as a revolving loan fund in memory of George B. and Louise Kerper.

HARVARD MEDICAL SCHOOL

GEORGE W. MERCK MEMORIAL FUND (1959). Established by the Merck Company Foundation as a revolving loan fund to assist fourth year students in financing their internships.

FRANCIS I. PROCTOR AID FUND (1942).

SCHOOL OF DENTAL MEDICINE

AMERICAN DENTAL ASSOCIATION — FUND FOR DENTAL EDUCATION DENTAL STUDENT LOAN FUND (1962). Gift of the Fund for Dental Education, Inc.

THE CHRISTIAN SOLDIER FUND (1925). Established by Miss Caroline F. Anderson for promising dental students. The loan carries no interest but the recipient must sign a note obligating him to repay the loan not later than five years from the date of the note.

DENTAL ALUMNI LOAN FUND (1927). Established and maintained by the Dental Alumni Association for financial aid to worthy students.

LUCINDA DAVIS FERNALD FUND (1936). A small fund, the gift of Adelbert Fernald, D.M.D. 1896, to be loaned to deserving New England-born students of good character.

INTERNATIONAL COLLEGE OF DENTISTS STUDENT LOAN FUND (1962). The gift of the International College of Dentists for a revolving loan fund available only to senior students.

ROBERT T. MOFFATT FUND (1925). A small fund from various contributors in memory of Robert T. Moffatt, D.M.D. 1895, for the benefit of needy and deserving students.

SCHOOL OF DENTAL MEDICINE REVOLVING LOAN FUND (1952). Recognizing the need for student loan money in the School, the President and Fellows of Harvard College authorized an appropriation to establish this fund.

SCHOOL OF DENTAL MEDICINE LOAN FUND (1953). An appropriation from the School's funds to establish additional loan money for needy students.

LOAN FUNDS

BENEFICIARY AND LOAN FUNDS AVAILABLE IN OTHER DEPARTMENTS OF THE UNIVERSITY AS WELL AS IN THE MEDICAL SCHOOL AND SCHOOL OF DENTAL MEDICINE

BENEFICIARY FUNDS

*CHARLES WILLIAM ELIOT FUND (1926). Established by the alumni in honor of Charles William Eliot on the occasion of Mr. Eliot's resignation as President and in recognition of his forty years of service. The income is to be divided between (a) grants of aid to descendants in the direct line of Mr. Eliot who need financial assistance and who are enrolled in any department of the University or in Radcliffe College, and (b) the support of instruction and research in Landscape Architecture.

*CALVIN AND LUCY ELLIS AID (1899). Bequest of Calvin Ellis, A.B. 1846, M.D. 1849, supplemented by a residuary bequest under the will of his sister, Miss Lucy Ellis. To pay the fees of tuition and instruction, the cost of text-books, room-rent and reasonable board, of such descendants of David Ellis and Beulah Newell, formerly of Dedham, Mass. and John Ellis and Hannah Ellis, formerly of Walpole, Mass., as may be students in any department of Harvard University. Birth certificate and proof of descent from Ellis family required.

HARRISON-DARLING-JENKS MEMORIAL FUND (1935). Bequest of Miss Laura Darling Jenks. For aiding students in attaining an education at Harvard University. Income assigned to the College Admission and Scholarship Committee.

LOAN FUNDS

The following Loan Funds are to be used for students in any department of the University. Students apply through their own Deans. Loans are made according to the terms ordinarily applied by the individual Schools. Applications may be obtained from the several Deans' Offices or from the General Scholarship Office, 906 Holyoke Center, Cambridge.

HARVARD MEDICAL SCHOOL

*JOHN W. APPEL LOAN FUND (1919). Restricted to descendants of John W. Appel of Lancaster, Pennsylvania, or their appointees.

FRANK GAYLORD COOK LOAN FUND (1951).

*THE HARVARD CLUB OF WASHINGTON, D.C., LOAN FUND (1957). Preference for students resident in the Washington, D.C. area.

*NEW CENTURY CLUB OF BOSTON LOAN FUND (1926). Preferably for men pursuing courses of study in Hebraic literature, culture and philosophy.

JESSIE SMITH NOYES FOUNDATION, INC. LOAN FUND (1960). To establish a revolving loan fund.

NELSON ROBINSON, JR. LOAN FUND (1941).

JAMES G. RODGER LOAN FUND (1883).

WILLIAMS FUND (1942).

PRIZES

MEDICAL SCHOOL

ISAAC ADLER (1934). Frida Adler. To be awarded once in three years for the best piece of original research within that period in the United States or Canada on any subject within the medical or allied sciences.

HARVARD MEDICAL ALUMNI ASSOCIATION PRIZE. To be awarded each year to the Permanent President of the Graduating Class. It has three purposes: to extend a greeting from the old Alumni to the new, to accord respect to the graduating class by honoring its chosen leader, to select for honor a man with whom long and cordial association is confidently anticipated.

HENRY ASBURY CHRISTIAN (1937). Dr. Samuel A. Levine. To be awarded annually on or about the seventeenth of February, which is Dr. Christian's birthday, to the student in the Fourth

LECTURESHIPS

Year Class who has displayed diligence and notable scholarship in his studies and offers promise for the future.

LEON REZNICK MEMORIAL PRIZE (1958). To be awarded to a fourth year student who has shown excellence and accomplishment in research conducted during his period of study at the Harvard Medical School. Candidates for the award must submit a typewritten paper to the Dean's Office by April 1.

JAMES TOLBERT SHIPLEY PRIZE (1952). Harriet S. Parker. Awarded as a prize for research carried out by a medical student, the results of which have been published or accepted for publication. Candidates for the award must submit papers to the Dean's Office by April 1.

SOMA WEISS AWARD. Awarded each year at the Undergraduate Assembly (see page 91).

SCHOOL OF DENTAL MEDICINE

HARVARD DENTAL ALUMNI MEDALS (1953). The Harvard Dental Alumni Association awards its gold and silver medals annually for all-around scholastic excellence.

HARVARD ODONTOLOGICAL SOCIETY (1949). The Harvard Odontological Society each year presents a Certificate of Merit to the best Senior Seminar Essayist of that year. This senior is selected by the Awards Committee of the School of Dental Medicine.

DR. GRACE MILLIKEN (1950). An award given annually when practicable, but at least once in three years, for an outstanding essay on the general subject of dental health.

LECTURESHIPS

John Adams Lectureship on Dermatology. The income of the fund to be expended in support of one or more lectures in dermatology in any given academic year.

HARVARD MEDICAL SCHOOL

The Edward K. Dunham Lectures for the promotion of the medical sciences have been given annually since 1923 by eminent investigators and teachers in one of the branches of the medical sciences or of the basic sciences which contribute toward the advance of medical science in the broadest sense. The lectures are open to the Faculty and students of the Harvard Medical School and College and all other interested professional persons. The lectures are given under the fund established for that purpose by Mary Dows Dunham in memory of her husband, Dr. Edward K. Dunham.

Laurence B. Ellis Lecture. Established by the students, associates, and friends of Dr. Ellis. To invite annually a visiting lecturer of distinction in the general field of cardiovascular physiology and disease to visit the Harvard Medical Unit at Boston City Hospital and to give a lecture during this visit to be open to the public.

The George W. Gay Lectures upon Medical Ethics are given annually at the Harvard Medical School. The fund for the establishment of these lectures was given in 1917 by Dr. George W. Gay.

The J. Howard Mueller Lectures are given annually at the Harvard Medical School. The fund for the establishment of these lectures was established in 1958 to honor the late J. Howard Mueller, Charles Wilder Professor of Bacteriology and Immunology.

The Alpha Omega Alpha Lecturer is to be nominated each year by the Alpha Omega Alpha Society. The honorarium and expenses of the lectureship to be supported from the fund established by the Society in 1952.

The Hanns Sachs Lectures in the field of Freudian psychoanalysis are supported by a gift in memory of Dr. Sachs. One or more may be given in any year.

The Dr. Andrew Yeomans Lectureship Fund has been established by members of the Class of 1934 and the Class of 1935 and friends in memory of Dr. Yeomans. Lectures are to be given annually and the lecturer will be chosen from young clinicians

RESEARCH FUNDS

in the fields of clinical research by a committee named by the donors.

THE CANCER COMMISSION OF HARVARD UNIVERSITY

Under the will of the late Mrs. Caroline Brewer Croft a sum of money was received in 1899 for the investigation of the cause and treatment of cancer. Since that time other sums have been contributed for cancer research and the Cancer Commission of Harvard University has been organized.

The Commission supports the Huntington Hospital beds, out-patient department, and cancer research laboratories at the Massachusetts General Hospital. It provides a service for pathological diagnosis of tumor tissue for the State of Massachusetts. This service was transferred in 1951 from the buildings of the Harvard Medical School to the Cancer Research Institute of the New England Deaconess Hospital. This service is carried on in part in a special laboratory at the Lemuel Shattuck Hospital, in part in laboratories at the Cancer Research Institute of the New England Deaconess Hospital.

The functions of the Cancer Commission are exercised by the Committee on Research and Development which is made up of the following members: Nathan Marsh Pusey, *Chairman*; George Packer Berry, Harvey Brooks, Franklin Lewis Ford, Roy Orval Greep, James Robbins Reynolds, John Crayton Snyder, Lewis Gard Wiggins, Henry Coe Meadow, *Executive Secretary*.

RESEARCH FUNDS

Application for support of investigations falling within the scope of any of the following research funds should be sent to the Chairman of the Committee or to the Dean.

HARVARD MEDICAL SCHOOL

REAR ADMIRAL W. L. CAPPS FUND

In 1949 a bequest was received from Edna Ward Capps to be known as the Rear Admiral W. L. Capps Fund, the income from which, under certain circumstances, to be used broadly for the cure and treatment of persons afflicted with diabetes. George W. Thorn, M.D., is Chairman of the Committee administering the income from this fund.

PROCTOR FUND

A bequest of fifty thousand dollars by Ellen Osborne Proctor, for the purpose of promoting the study of chronic diseases, subsequently has been increased by an additional fifty thousand dollars from another member of the Proctor family. The income of this fund is to be devoted to investigations into the nature and treatment of chronic diseases and the care of persons afflicted with these diseases while in hospitals for such investigations. Arthur T. Hertig, M.D., is Chairman of the Committee administering the income from this fund.

WILLIAM W. WELLINGTON FUND

In 1925 a bequest was received from William H. Wellington to establish the "William W. Wellington Memorial Research Fund." The income of this fund is to be applied for research concerning the etiology and therapeutics of the diseases of man. Arthur T. Hertig, M.D., is Chairman of the Committee administering the income from this fund.

OPPORTUNITIES FOR RESEARCH

The laboratories of the Medical School and its associated hospitals provide exceptionally rich opportunities for each medical student to participate in a research program in the field of his

THE UNDERGRADUATE ASSEMBLY

special interest. The wide variety of investigations underway in basic and clinical sciences assures each student of the facilities to learn special techniques and to pursue an investigation of his choice.

Each medical student is encouraged to devote some of the free time during the school year and the summer months to a research program. Exceptional students may be permitted to withdraw from medical school for a year to devote full time to research. Any student in good academic standing and who has shown promise in research may be granted the privilege of devoting up to six months of his fourth scholastic year to research under the Honors Tutorial System in place of certain of the clinical courses usually required. A considerable number of fellowships are available for the support of students engaged in summer and part-time research.

Any student interested in undertaking research is urged to discuss his program with the Associate Dean for Student Affairs or one of the Honors Tutors.

THE UNDERGRADUATE ASSEMBLY

The Undergraduate Assembly, held late in the spring of each year under student auspices, provides an opportunity for students from all classes to present formally the results of their investigations to the students and Faculty of the Medical School. The Soma Weiss Award is made at this meeting.

HARVARD MEDICAL SCHOOL

GENERAL PLAN OF INSTRUCTION

On the following pages will be found a brief description of the plan of instruction for each of the four years of Medical School, followed by a statement of the general plan of instruction offered by each Department.

GENERAL PLAN OF THE FIRST TWO YEARS

In general, during the first semester of each of the first two years, individual departments introduce selected material characteristic of their particular disciplines. In the second semester of each year, the departments collaborate in the presentation of a unified approach to various problems of human biology.

In the first year, the first semester is devoted to a study of gross anatomy, an introduction to histology and cytology, and to the fundamentals of physiology and biochemistry. During the second semester, the anatomy (macro- and micro-), physiology and biochemistry relevant to studies of the body fluids, respiration, the liver and the kidney, and the nervous, gastrointestinal and endocrine systems is presented in an interdepartmental framework. Three additional exercises complete the material of the first year. Voluntary clinics designed to indicate the application of the basic medical sciences to understanding disease in man are presented at roughly weekly intervals throughout the year. During the first semester a series of lectures covering elements of genetics, embryology, and cell biology are given under the designation of Developmental Biology. In the second semester, a course in Psychic Growth and Development introducing aspects of normal psychological development in man occupies the time assigned to Developmental Biology in the first semester and some of that assigned to correlation clinics. A diagrammatic summary of these arrangements is presented on page 98.

In the first semester of the second year, the Departments of Bacteriology, Pathology and Pharmacology offer courses in their

PLAN OF INSTRUCTION

respective disciplines. A number of correlated interdepartmental exercises are also included. The last portion of the semester is devoted to chemotherapy taught jointly by the Departments of Bacteriology and Pharmacology.

During the second semester a correlated program in pathologic physiology is given. Mechanisms of disease are presented in a unified course by members of the Departments of Gynecology, Medicine, Neurology, Obstetrics, Pathology, Pediatrics, Pharmacology, Preventive Medicine, Psychiatry, Radiology, Surgery, and Tropical Public Health. In addition, practical instruction in the taking of case histories and physical examinations is given on the wards and out-patient departments of the hospitals at which there are Harvard teaching units.

During the second year, in addition to an introduction to the evaluation of data by biostatistical methods, a series of lectures develops further concepts of individual psychologic functioning. Emphasis now shifts to the nature and genesis of abnormal psychological mechanisms which result from both social and physical factors and are manifested in symptoms and behavioral disturbances. A diagrammatic summary of the arrangements for the second year is presented on page 99.

GENERAL PLAN OF THE THIRD AND FOURTH YEARS

The instruction in the third and fourth years is carried on at the teaching hospitals affiliated with the Medical School. It is designed to teach the student to apply the principles of normal and abnormal human biology, acquired in the first two years, to the diagnosis and treatment of disease.

In the third year the teaching is by lectures, clinical demonstrations and practical work with patients. The practical instruction takes place in small groups on the wards or in the outpatient departments of the hospitals. Courses are required in Dermatology, Genito-urinary Surgery, Gynecology, Legal Medicine, Medicine, Neurology, Obstetrics, Ophthalmology, Otology and Laryngol-

HARVARD MEDICAL SCHOOL

ogy, Orthopedic Surgery, Pediatrics, Preventive Medicine, Psychiatry, and Surgery.

In the fourth year the student continues his broad study of disease and begins to assume some responsibility for the care of patients. This is accomplished by service as a clinical clerk on the hospital wards and as an assistant in the outpatient clinics. Eight months of work is required: two months each of Medicine and Surgery; one month each of Obstetrics, Pediatrics, and Psychiatry; and at least one month of an elective course. In addition, students may elect courses for one, two, or three additional months by working during the summer between the third and fourth years.

ELECTIVE AND VOLUNTARY COURSES

In addition to the requirement of one elective course in the fourth year, opportunities for voluntary work are offered to first, second, and third year students on free afternoons, and to fourth year students during the additional months mentioned above. It is believed that students will welcome a chance to keep in touch with the most recent developments in the fundamental sciences; that an interest in certain fundamental subjects will have been aroused by their clinical work; or that they may feel the desire for additional exploration in some field. Students are not required to take this work. It is entirely a voluntary matter, and no credit is given.

There are also opportunities for association with voluntary groups interested in studying the economic, social and historical aspects of medicine.

THE TUTORIAL PROGRAM AND STUDENT RESEARCH

The Tutorial Program was established in 1923 to foster student interest and participation in research. In 1957 it was expanded to provide each entering student with a tutor for his first year. Some twenty-five Tutors in Medical Sciences are appointed

PLAN OF INSTRUCTION

annually to enable first year students to meet informally in groups of five with a tutor. These weekly meetings are intended to assist the student in organizing and correlating his knowledge and to point out the implications and applications of the knowledge of basic science gained in the formal courses to clinical medicine and to research. These are not intended to be review sessions or to prepare students for examinations in the formal courses, but to develop better understanding of the medical sciences as a whole and of medicine as an art and profession. In addition the expanded Tutorial System provides an opportunity for each student during his first year to become well acquainted with some member of the Faculty to whom he may turn for advice in planning his medical career and in other matters.

The Honors Tutorial Program of the second, third and fourth years is designed primarily to aid students who wish to undertake original research in one of the medical sciences during their medical school careers. Students doing research, or planning to do research, are assigned to the appropriate Tutor for guidance. The Tutors may organize seminars and symposia to assist students to decide on a field of research or to formulate a specific research problem. They also help the student by placing him with the member of the Faculty whose research interests are in his field and who is best suited to guide his research.

Students may devote free time during the school year and the summer months to this research problem. Fellowships are available for the financial support of student research both during the summer months and during the school year. Fourth year students who have shown promise in extracurricular research may request the privilege of replacing certain clinical courses with four to six months completely free for research in any of the basic sciences or in any of the clinical divisions. Application for this privilege must be made before March 1 of the student's third year. Students also have the opportunity to withdraw from medical school for a year to pursue a research problem. (See section on "Opportunities for Research" page 90.) The results of the research may be presented as a thesis at the end of the fourth year

HARVARD MEDICAL SCHOOL

in support of the student's candidacy for the medical degree with Honors in a Special Field.

Abbreviations used in the following pages:

B.C.H.	= Boston City Hospital.	M.M.H.C.	= Massachusetts Mental Health Center.
B.I.H.	= Beth Israel Hospital.	Mt.A.H.	= Mount Auburn Hospital.
B.L.I.H.	= Boston Lying-in Hospital.	N.E.C.H.	= New England Center Hospital.
C.H.M.C.	= The Children's Hospital Medical Center.	N.E.D.H.	= New England Deaconess Hospital.
C.M.C.	= Children's Medical Center.	P.B.B.H.	= Peter Bent Brigham Hospital.
F.H.W.	= Free Hospital for Women.	P.L.I.H.	= Providence Lying-in Hospital.
H.M.S.	= Harvard Medical School.	R.B.B.H.	= Robert Breck Brigham Hospital.
L.I.H.	= Long Island Hospital.	S.D.M.	= School of Dental Medicine.
McL.H.	= McLean Hospital.	S.P.H.	= School of Public Health.
M.E.E.I.	= Massachusetts Eye and Ear Infirmary.	W.R.V.A.H.	= West Roxbury Veterans' Administration Hospital.
M.G.H.	= Massachusetts General Hospital.		
M.I.T.	= Massachusetts Institute of Technology.		

PLAN OF INSTRUCTION

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Gross Anatomy 245	Bacteriology 168	Medicine 211	Medicine 288
General Histology and Cytology 127	Pathology 331	Dermatology 37	Surgery 288
Circulatory Physiology 80	(including Parasitology and Neuro-pathology)	Neurology 43	Obstetrics and Gynecology 144
Cellular Biochemistry 87	Pharmacology 120	Psychiatry 44	Pediatrics 144
Respiration, Kidney, and Body Fluids 168	Pathologic Physiology * 538	Ophthalmology 39	Psychiatry 144
Gastrointestinal and Endocrine Systems 168	Growth and Development: Biostatistics 15	Surgery 27	Elective 144
Neurosciences 196	Introduction to Psychopathology 32	G. U. Surgery 27	Preventive Medicine
Somatic Growth and Development 86	Pediatrics 3	Orthopedic Surgery (Children) 45	Survey 50
Psychic Growth and Development 30	Obstetrics and Gynecology 18	Obstetrics and Gynecology 160	
Tutorial 36		Pediatrics 74	
		Preventive Medicine 70	
		Legal Medicine 13	
		Radiology 4	

* A multidepartmental integrated course which includes Case Taking (Medicine and Surgery) and Laboratory Diagnosis.

HARVARD MEDICAL SCHOOL

FIRST YEAR

FIRST SEMESTER
SECOND SEMESTER
CORRELATIVE TEACHING

PRESENTATION OF PRINCIPLES

GROSS ANATOMY	
CELLULAR BIOCHEMISTRY	CIRCULATORY PHYSIOLOGY
DEVELOPMENTAL BIOLOGY	
CORRELATION CLINICS	
FREE TIME	

BODY FLUIDS RESPIRATION KIDNEY	GASTRO- INTESTINAL AND ENDOCRINE SYSTEMS	NEURO- SCIENCES
PSYCHIC GROWTH & DEVELOPMENT		
CORRELATION CLINICS		
FREE TIME		

The Arrangement of Course Material in the First Year.

In each semester, the sequential arrangement of the course material is presented. The area of each block in each semester diagram represents the relative amount of time allocated to each subject. Comparisons of time allocated to topics may be made only within each separate semester diagram, but not between diagrams.

FIRST SEMESTER

SECOND SEMESTER

PRESENTATION OF PRINCIPLES

CORRELATIVE TEACHING

The Arrangement of Course Material in the Second Year.

The area of each block in the first semester represents the relative amount of time allocated to each subject. The correlative teaching consists of a large course on the mechanisms of disease (Pathologic Physiology), and of a course in the methods of history taking and physical diagnosis (Case Taking).

PATHOLOGY	
BACTERIOLOGY	
PHARMACOLOGY	
	CHEMOTHERAPY
BIOSTATISTICS	
FREE TIME	

The various organ systems are treated in the order shown below.

- Hematopoietic system (68 hours)
- Gastrointestinal system (44 hours)
- Nervous system (70 hours)
- Respiratory system (37 hours)
- Cardiovascular system (46 hours)
- Renal system (37 hours)
- Endocrine system (46 hours)
- Case Taking (171 hours)

The following courses are also taught during the second semester:

- Parasitology (41 hours)
- Psychiatry (34 hours)

SEPTEMBER

JANUARY

JANUARY

MAY

THIRD YEAR

The Class is divided into Thirds and the Thirds interchange every 64 days.

The Thirds assigned to medicine and surgery are divided into two groups as indicated in the schedule:

Group I — Has Medicine (or Surgery) on Mondays, Wednesdays, and Fridays and the medical (or surgical) specialties on Tuesdays, Thursdays, and Saturdays.

Group II — Has Surgery (or Medicine) on Tuesdays, Thursdays, and Saturdays and the surgical (or medical) specialties on Mondays, Wednesdays, and Fridays.

The remaining Third, also divided into two groups as indicated in the schedule, interchanges every 32 days.

FOURTH YEAR

Each block represents one month. Order of subjects variable.

1		2	3	4
MORNING	MEDICINE	MEDICINE	SURGERY	SURGERY
AFTERNOON				
5		6	7	8
MORNING	OBSTETRICS AND GYNECOLOGY	PEDIATRICS	PSYCHIATRY	ELECTIVE
AFTERNOON				

In addition to the eight months' required work, each student may elect courses for three additional months by anticipating work during the summer months.

HARVARD MEDICAL SCHOOL

ANNOUNCEMENT OF COURSES

DEPARTMENT OF ANATOMY

- DON W. FAWCETT, M.D., Hersey Professor of Anatomy, James Stillman Professor of Comparative Anatomy, Head of the Department, and Curator of the Warren Anatomical Museum.
- ROY O. GREEP, PH.D., A.M. (hon.), S.D. (hon.), Professor of Anatomy in the School of Dental Medicine.
- SANFORD L. PALAY, M.D., A.M. (hon.), Bullard Professor of Neuroanatomy.
- EDWARD A. EDWARDS, M.D., Associate Clinical Professor of Anatomy.
- ELIZABETH D. HAY, M.D., Louise Foote Pfeiffer Associate Professor of Embryology, and Tutor in Anatomy.
- FRANKLIN F. SNYDER, M.D., A.M. (hon.), Associate Professor of Anatomy and Obstetrics.
- GEORGE E. ERIKSON, PH.D., Assistant Professor of Anatomy (part-time), and Associate Curator of the Warren Anatomical Museum.
- SUSUMU ITO, PH.D., Assistant Professor of Anatomy (from January 1, 1964).
- CHARLES P. LYMAN, PH.D., Assistant Professor of Anatomy.
- HELEN A. PADYKULA, PH.D., Assistant Professor of Anatomy.
- JEAN-PAUL REVEL, PH.D., Assistant Professor of Anatomy.
- GEORGE SZABO, PH.D., Assistant Professor of Anatomy in the Department of Dermatology.
- STANLEY J. ADELSTEIN, M.D., Philip H. Cook Fellow in Radiology, and Associate in Anatomy.
- JAY B. ANGEVINE, JR., PH.D., Associate in Anatomy.
- SUSUMU ITO, PH.D., Associate in Anatomy (through December 31, 1963).
- WILLARD D. ROTH, PH.D., Associate in Anatomy.

ANATOMY

- ALAN PETERS, PH.D., Visiting Lecturer on Anatomy.
WILLIAM D. TROTTER, PH.D., Visiting Lecturer on Anatomy
(appointment expires February 29, 1964).
RAYMOND L. HAYES, JR., PH.D., Instructor in Anatomy.
SERGEI P. SOROKIN, M.D., Instructor in Anatomy.
ELIZABETH TABER, PH.D., Instructor in Anatomy.
DAVID E. WOLFE, M.D., Instructor in Anatomy.
IRWIN BERMAN, PH.D., Research Fellow in Anatomy (appointment expired December 31, 1963).
RUTH E. BULGER, PH.D., Research Fellow in Anatomy.
RICHARD E. COGGESHALL, M.D., Research Fellow in Anatomy.
DANIEL S. FRIEND, M.D., Research Fellow in Anatomy.
GERALDINE F. GAUTHIER, M.S., Research Fellow in Anatomy
(appointment expired July 31, 1963).
JOE L. GRIFFIN, PH.D., Research Fellow in Anatomy.
DAVID HAMILTON, PH.D., Research Fellow in Anatomy (from
September 1, 1963).
PAULO H. HASHIMOTO, M.D., Research Fellow in Anatomy.
ATSUSHI ICHIKAWA, M.D., Research Fellow in Anatomy.
ARNOLD J. SCHECTER, M.D., Research Fellow in Anatomy.
FACUNDO VALVERDE-GARCIA, M.D., PH.D., Research Fellow in
Anatomy (from September 1, 1963).
JOHN VENABLE, D.V.M., Research Fellow in Anatomy.
ROBERT D. STATON, M.S., Teaching Fellow in Anatomy.
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Affiliated:

- RICHARD L. SIDMAN, M.D., Assistant Professor of Neuropathology.
WILLIAM H. TIMBERLAKE, M.D., Assistant Clinical Professor of
Neurology.
J. DAVID ROBERTSON, M.D., Associate Professor of Neuropath-
ology at the McLean Hospital.
BENJAMIN SPECTOR, M.D., Coordinator of Anatomical Materials.
JESSE F. SCOTT, M.D., Associate Professor of Oncologic Medicine.

The Department of Anatomy offers instruction in gross human anatomy, histology and cytology, embryology and neuroanatomy.

HARVARD MEDICAL SCHOOL

Opportunities are also afforded for advanced work and research in these subjects. The Department occupies the Morgan Anatomical Building in the first three floors of the wing designated as BI, and the first two floors of BII. This space includes offices and research laboratories of the staff, rooms for graduate students and fellows, seminar rooms, a photographic department and laboratories devoted to histochemistry, tissue culture, and electron microscopy.

There is a large departmental library containing complete files of the important journals in the fields of anatomy, developmental biology, and experimental cytology, together with many standard textbooks and works of reference. The library is open to staff, students and others, on a non-circulating basis.

The Minot Embryological Collection is a unique feature of the laboratory. It comprises approximately twenty-three hundred series of sections of selected vertebrate embryos representing a wide range of species and therefore affords opportunities for research in comparative embryology such as cannot be found elsewhere.

The Department also has valuable neurological material for both teaching and research, including two entire human brains cut serially in the transverse and horizontal planes, with the sections alternately stained by the Pal-Weigert and Nissl methods.

Required Courses

ANATOMY A AND B. *First Year.*—The courses of the first year are intended to teach human anatomy, both gross and microscopic, together with the essentials of human embryology and neurology.

In the study of gross anatomy, students make a complete dissection of the human body in the first semester. Four students are assigned to the same body, and will work together during the course. The study of the skeleton is carried on concurrently with the dissection, and each student is provided with a box of bones which may be kept throughout the course. There are lectures and demonstrations which will serve to emphasize the clinical application of gross anatomical relations and to teach certain aspects of human biology not adequately treated in the textbooks. Special dissections made by prosectors from the second year class, and various anatomical specimens and preparations will be displayed to supplement the student's own

ANATOMY

dissections. Students are urged to study these specimens and to discuss them informally with the instructors.

That part of the course in microscopic anatomy given in the first semester is intended to give the student familiarity with the normal structure of cells and tissues as they appear under light microscope and with their finer structure as revealed by the electron microscope. The histology presented in the second semester forms part of the correlative teaching in which the structure, physiology and biochemistry of the major organ systems are studied. Demonstrations of fresh tissue are prepared for examination with phase contrast and interference microscopy, and special cytological and histochemical preparations are displayed to present the broad range of techniques used in morphological investigations.

Embryology is taught in conjunction with the principles of genetics in a series of lectures extending throughout the first semester.

Neuroanatomical instruction is given as a part of the section of correlative teaching designated "Neurosciences."

FIRST YEAR

HOURS

Lectures. Drs. FAWCETT, PALAY, EDWARDS, ERIKSON, HAY, PADYKULA, SCOTT, SIDMAN, SZABO, ANGEVINE, ITO, REVEL, ADELSTEIN, ROTH, and SOROKIN.

Demonstrations. To sections of the class, at the pleasure of the instructors.

Laboratory work.

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Fourth Year Elective Courses

1. Surgical Anatomy. Dr. EDWARDS and ASSOCIATES. Whole course, one month.
20. Investigation in:
 - Cytology and cell ultrastructure. Drs. FAWCETT, ITO, and REVEL.
 - Experimental embryology. Dr. HAY.
 - Histophysiology and histochemistry. Dr. PADYKULA.
 - Human and comparative anatomy. Dr. ERIKSON.
 - Environmental and comparative physiology. Dr. LYMAN.
 - Neuroanatomy. Dr. ANGEVINE.
 - Neuroendocrinology. Dr. ROTH.
 - Radiation biology. Dr. ADELSTEIN.

HARVARD MEDICAL SCHOOL

DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY

BERNARD D. DAVIS, M.D., Adele Lehman Professor of Bacteriology and Immunology, and Head of the Department.

GEORGE P. BERRY, M.D., LL.D., A.M. (hon.), S.D. (hon.), Litt.D., L.H.D., Professor of Bacteriology, and Dean of the Faculty of Medicine.

ALBERT H. COONS, M.D., Career Investigator of the American Heart Association, and Visiting Professor of Bacteriology and Immunology.

JOHN F. ENDERS, PH.D., University Professor.

MONROE D. EATON, M.D., Associate Professor of Bacteriology and Immunology.

HAROLD AMOS, PH.D., Associate Professor of Bacteriology and Immunology.

LUIGI C. GORINI, PH.D. (Equiv.), A.M. (hon.), American Cancer Society Associate Professor of Bacteriology and Immunology.

MAHLON B. HOAGLAND, M.D., Associate Professor of Bacteriology and Immunology, and Ruby Boyer Miller Fellow in Medical Research.

EDWARD H. KASS, PH.D., M.D., A.M. (hon.), Associate Professor of Bacteriology and Immunology.

SIDNEY LESKOWITZ, PH.D., Assistant Professor of Bacteriology and Immunology at the Massachusetts General Hospital.

BYRON H. WAKSMAN, M.D., Assistant Professor of Bacteriology and Immunology at the Massachusetts General Hospital (resigned July 31, 1963).

DONALD T. DUBIN, M.D., Associate in Bacteriology and Immunology, and Tutor in Bacteriology and Immunology.

HOWARD GOLDFINE, PH.D., Associate in Bacteriology and Immunology.

LAWRENCE J. J. KUNZ, PH.D., Associate in Bacteriology and Immunology at the Massachusetts General Hospital.

MORTIMER LITT, M.D., Associate in Bacteriology and Immunology.

BACTERIOLOGY AND IMMUNOLOGY

HIROSHI NIKAIKO, M.D., Associate in Bacteriology and Immunology at the Massachusetts General Hospital.

ELMER R. PFEFFERKORN, JR., PH.D., Associate in Bacteriology and Immunology.

NATHAN CITRI, PH.D., Visiting Lecturer on Bacteriology and Immunology (appointment expired August 31, 1963).

JEAN VIEUCHANGE, M.D., Visiting Lecturer on Bacteriology and Immunology (November 1, 1963 through February 29, 1964).

JULIAN E. DAVIES, PH.D., Research Associate in Bacteriology and Immunology.

RONALD HANCOCK, PH.D., Research Associate in Bacteriology and Immunology.

JEANA D. LEVINTHAL, M.D., Research Associate in Bacteriology and Immunology.

IOLANDA E. LOW, M.D., Research Associate in Bacteriology and Immunology.

JOHN H. PETERS, M.D., Research Associate in Bacteriology and Immunology.

PHILIP J. PORTER, M.D., Research Associate in Bacteriology and Immunology.

ENNIO VIVALDI, M.D., Research Associate in Bacteriology and Immunology (September 1, 1963 through February 29, 1964).

BARBARA K. WATSON, PH.D., Research Associate in Bacteriology and Immunology.

CHARLES T. AMBROSE, M.D., Instructor in Bacteriology and Immunology.

ANN E. FARNHAM, PH.D., Instructor in Bacteriology and Immunology.

CARL HIRSCH, M.D., Instructor in Bacteriology and Immunology.

JOAN B. DANIELS, S.B., Assistant in Bacteriology and Immunology.

CYRUS AHMAD-ZADEH, M.D., Research Fellow in Bacteriology and Immunology.

CHANDRA R. AMARASINGHAM, M.D., Research Fellow in Bacteriology and Immunology.

HARVARD MEDICAL SCHOOL

- NICOLE A. BAUMANN, M.D., Research Fellow in Bacteriology and Immunology (appointment expired December 31, 1963).
- SARAH BEN-OR, PH.D., Harold Ernest Research Fellow in Bacteriology and Immunology (from November 1, 1963).
- CARLA M. DEL CARPIO, M.D., Research Fellow in Bacteriology and Immunology (appointment expired August 31, 1963).
- CARLOS DELUCCHI, M.D., Research Fellow in Bacteriology and Immunology (from September 1, 1963).
- MARIO DI GIROLAMO, PH.D., Research Fellow in Bacteriology and Immunology.
- GARETH M. GREEN, M.D., Research Fellow in Bacteriology and Immunology (appointment expired September 30, 1963).
- DENNIS GUTTMANN, M.B., CH.B., Research Fellow in Bacteriology and Immunology.
- PER OTTO HAGEN, M.D., Research Fellow in Bacteriology and Immunology (from January 1, 1964).
- VALERIE E. JONES, PH.D., Research Fellow in Bacteriology and Immunology.
- H. OLLE KARLSTROM, PH.D., Research Fellow in Bacteriology and Immunology (from September 1, 1963).
- CHAVA KIRSCHMANN, PH.D., Research Fellow in Bacteriology and Immunology (from September 1, 1963).
- JULIO I. MAIZTEGUI, M.D., Research Fellow in Bacteriology and Immunology (appointment expired September 30, 1963).
- MICHELINE M. MATHEWS, M.D., Research Fellow in Bacteriology and Immunology.
- KOSANA A. MITROVIC, PH.D., Research Fellow in Bacteriology and Immunology.
- YORIO NAIDE, M.D., Research Fellow in Bacteriology and Immunology (from January 1, 1964).
- DAVID OLD, PH.D., Harold C. Ernst Research Fellow in Bacteriology and Immunology (from September 1, 1963).
- LIANE REIF, PH.D., Research Fellow in Bacteriology and Immunology (from October 1, 1963).
- HOWARD S. RUBENSTEIN, M.D., Harold C. Ernst Research Fellow in Bacteriology and Immunology.

BACTERIOLOGY AND IMMUNOLOGY

WENDY D. SAVAGE, M.B., CH.B., Research Fellow in Bacteriology and Immunology.

OSCAR A. SCORNIK, M.D., Research Fellow in Bacteriology and Immunology (from September 1, 1963).

DAVID H. SMITH, M.D., Research Fellow in Bacteriology and Immunology.

RUY SOEIRO, M.D., Research Fellow in Bacteriology and Immunology.

ROBERTO M. TOSI, M.D., Research Fellow in Bacteriology and Immunology (from September 1, 1963).

JACOB YASHPHE, PH.D., Research Fellow in Bacteriology and Immunology.

MICHAEL YUDKIN, PH.D., Research Fellow in Bacteriology and Immunology.

JULIO MUNOZ-GELDRES, M.D., Teaching Fellow in Bacteriology and Immunology.

Affiliated:

HOWARD H. HIATT, M.D., Herrman Ludwig Blumgart Professor of Medicine.

JOHN C. SNYDER, M.D., Professor of Public Health Bacteriology, and Dean of the School of Public Health.

THOMAS H. WELLER, M.D., LL.D., Richard Pearson Strong Professor of Tropical Health in the School of Public Health.

CHARLOTTE C. CAMPBELL, S.B., Associate Professor of Medical Mycology, S.P.H.

JEROME GROSS, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

SAMUEL L. KATZ, M.D., Assistant Professor of Pediatrics at The Children's Hospital.

MORTON N. SWARTZ, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

KARL F. AUSTEN, M.D., Associate in Medicine at the Massachusetts General Hospital.

RONALD J. GIBBONS, PH.D., Associate in Bacteriology and Immunology at the Forsyth Dental Infirmary for Children.

HARVARD MEDICAL SCHOOL

THOMAS J. GILL, 3D, M.D., Associate in Pathology.

SIGMUND S. SOCRANSKY, D.D.S., Associate in Dental Medicine at the Forsyth Dental Infirmary for Children.

BARBARA W. KALCKAR, PH.D., Research Associate in Bacteriology and Immunology in the Department of Medicine.

ION GRESSER, M.D., Research Associate in Medicine.

J. GABRIEL MICHAEL, PH.D., Research Associate in Bacteriology and Immunology in the Department of Pediatrics.

Required Course

BACTERIOLOGY A. *Second Year.*—This course consists of lectures, laboratory exercises, and conferences, designed to acquaint the student with the principles of bacteriology, virology, immunology, allergy, and chemotherapy. The fungi will also be briefly considered.

The first part of the course consists of an introduction to general microbiology, including the structure, physiology, metabolism, and genetics of bacteria and bacteriophage. Attention will then be given to the agents of infectious disease, with emphasis on properties that are useful in their identification and in understanding their pathogenicity. The exercises on host-parasite relations and allergy will be correlated with pathology, while those on chemotherapy will be correlated with pharmacology. Clinics held in various hospitals will introduce the student to infectious disease in man.

While the course is designed primarily as a preparation for later clinical work on infectious disease, considerable attention will also be given to illustrating the use of unicellular organisms in studying problems of cell physiology and molecular biology common to all cells, including those of man.

SECOND YEAR

HOURS

Lectures, laboratory work, and conferences. DR. DAVIS and STAFF.

First half-year. Most exercises take place on Monday, Wednesday, and Friday afternoons with conferences on Saturday mornings.

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Fourth Year Elective Courses

20. Research. Qualified students may arrange time with a member of the staff. Equipment and instruction are available for the

BACTERIOLOGY AND IMMUNOLOGY

usual procedures of the fields designated, and also for electron microscopy, animal cell culture, and localization of antigens and antibodies by fluorescence microscopy.

Cell physiology and metabolism. Drs. DAVIS, GORINI, HOAGLAND, DUBIN, and GOLDFINE.

Virology. Drs. ENDERS, EATON, AMOS, and PFEFFERKORN.

Immunology. Drs. COONS and LESKOWITZ.

Medical bacteriology and chemotherapy. Dr. KASS.

Voluntary Courses

30. Research. Opportunity for research can be arranged for qualified students upon consultation with members of the staff.
31. General Virology. Half course (spring term). Drs. EATON, AMOS, and PFEFFERKORN. Tuesday afternoon. Lectures and discussion.
32. Immunology. Half course (spring term). Drs. COONS and LESKOWITZ. Tuesday or Thursday afternoon. Lectures and discussion. Alternate years; will not be offered in 1964-65.
33. Bacterial Genetics. Half course (spring term). Drs. DAVIS, GORINI, and HOAGLAND. Thursday afternoon. Lectures and discussion.

HARVARD MEDICAL SCHOOL

DEPARTMENT OF BIOLOGICAL CHEMISTRY

EUGENE P. KENNEDY, PH.D., A.M. (hon.), Hamilton Kuhn Professor of Biological Chemistry, and Head of the Department.

ERIC G. BALL, PH.D., S.D. (hon.), A.M. (hon.), Edward S. Wood Professor of Biological Chemistry, and Chairman of the Division of Medical Sciences of the Faculty of Arts and Sciences.

ELKAN R. BLOUT, PH.D., A.M. (hon.), Professor of Biological Chemistry.

JORDI FOLCH-PI, M.D., A.M. (hon.), Professor of Neurochemistry at the McLean Hospital.

HERMAN M. KALCKAR, M.D., PH.D., A.M. (hon.), Professor of Biological Chemistry at the Massachusetts General Hospital.

MANFRED L. KARNOVSKY, PH.D., A.M. (hon.), Professor of Biological Chemistry and Secretary of the Faculty of Medicine.

CLAUDE A. VILLEE, JR., PH.D., A.M. (hon.), Professor of Biological Chemistry at the Boston Lying-in Hospital, and Tutor in Biological Chemistry.

LEWIS L. ENGEL, PH.D., Associate Professor of Biological Chemistry, and Permanent Faculty Fellow of the American Cancer Society.

ROGER W. JEANLOZ, D.Sc., A.M. (hon.), Associate Professor of Biological Chemistry at the Massachusetts General Hospital.

WALTER E. KNOX, M.D., Associate Professor of Biological Chemistry at the New England Deaconess Hospital.

*ARTHUR K. SOLOMON, PH.D., D.PHIL., Associate Professor of Biophysics.

JOHN GERGELY, M.D., PH.D., Assistant Professor of Biological Chemistry (part-time).

DWAIN D. HAGERMAN, M.D., Assistant Professor of Biological Chemistry at the Free Hospital for Women and Tutor in Biological Chemistry.

* Appointment under the Committee on Medical Research in Biophysics.

BIOLOGICAL CHEMISTRY

STANDISH C. HARTMAN, PH.D., Assistant Professor of Biological Chemistry (from January 1, 1964).

EDMUND C. C. LIN, PH.D., Assistant Professor of Biological Chemistry.

CHARLES C. RICHARDSON, M.D., Assistant Professor of Biological Chemistry (from January 1, 1964).

SIDNEY V. RIEDER, PH.D., Assistant Professor of Biological Chemistry at the Massachusetts General Hospital.

DONALD F. H. WALLACH, M.D., Assistant Professor of Biological Chemistry.

PIERRE J. STOFFYN, PH.D., Lecturer on Biological Chemistry at the McLean Hospital.

JOSEPH B. ALPERS, M.D., Associate in Biological Chemistry.

JOHN L. BETHUNE, PH.D., Associate in Biological Chemistry at the Peter Bent Brigham Hospital (from January 1, 1964).

DONALD G. COMB, PH.D., Associate in Biological Chemistry at the Massachusetts General Hospital.

ROBERT A. DARROW, PH.D., Associate in Biological Chemistry at the Massachusetts General Hospital (from January 1, 1964).

STANDISH C. HARTMAN, PH.D., Associate in Biological Chemistry (through December 31, 1963).

GEORGE HAUSER, PH.D., Associate in Biological Chemistry at the McLean Hospital.

CLIFFE D. JOEL, PH.D., Associate in Biological Chemistry.

FRANCIS N. LEBARON, PH.D., Associate in Biological Chemistry at the McLean Hospital.

HENRY PAULUS, PH.D., Associate in Biological Chemistry (from January 1, 1964).

WILLIAM J. REDDY, D.Sc., Associate in Biological Chemistry at the Peter Bent Brigham Hospital (from January 1, 1964).

ROBERT G. SPIRO, M.D., Associate in Biological Chemistry at the Peter Bent Brigham Hospital (from January 1, 1964).

EDWARD J. BEHRMAN, PH.D., Research Associate in Biological Chemistry.

JOHN L. BETHUNE, PH.D., Research Associate in Biological Chemistry (through December 31, 1963).

HARVARD MEDICAL SCHOOL

JEAN BURNETT, PH.D., Research Associate in Biological Chemistry.
ANDREW H. T. CHEUNG, PH.D., Research Associate in Biological Chemistry (from September 1, 1963).

ELIZABETH F. CLAFLIN, PH.D., Research Associate in Biological Chemistry.

JOHN T. CLARKE, PH.D., Research Associate in Biological Chemistry.

CAROLYN COHEN, PH.D., Research Associate in Biological Chemistry.

ROBERT A. DARROW, PH.D., Research Associate in Biological Chemistry (through December 31, 1963).

SUNIL K. DASGUPTA, PH.D., Research Associate in Biological Chemistry.

KANEY EBISUZAKI, PH.D., Research Associate in Biological Chemistry.

SHOU-CHENG J. FU, PH.D., Research Associate in Biological Chemistry.

GODFREY S. GETZ, M.B., CH.B., D.PHIL., Research Associate in Biological Chemistry (from September 1, 1963).

JOHN R. GILBERTSON, PH.D., Research Associate in Biological Chemistry (appointment expired August 31, 1963).

LORNA L. GILMORE, PH.D., Research Associate in Biological Chemistry.

SEN-ITIRO HAKOMORI, M.D., Research Associate in Biological Chemistry (from September 1, 1963).

MERVYN ISRAEL, PH.D., Research Associate in Biological Chemistry.

SUSAN LOWEY, PH.D., Research Associate in Biological Chemistry.

LEWIS T. MANN, JR., PH.D., Research Associate in Biological Chemistry.

EZIO MERLER, PH.D., Research Associate in Biological Chemistry (from September 1, 1963).

LEWIS C. MOKRASCH, PH.D., Research Associate in Biological Chemistry.

JAMES C. ORR, PH.D., Research Associate in Biological Chemistry.

BIOLOGICAL CHEMISTRY

ARTHUR R. PAGE, M.D., Research Associate in Biological Chemistry.

ROBERT H. PURDY, PH.D., Research Associate in Biological Chemistry.

ANNETTE M. C. RAPIN, PH.D., Research Associate in Biological Chemistry.

WILLIAM J. REDDY, D.Sc., Research Associate in Biological Chemistry (through December 31, 1963).

SISIR K. SENGUPTA, PH.D., Research Associate in Biological Chemistry.

A. WILLIAM SHAFER, M.D., Research Associate in Biological Chemistry.

NATHAN SHARON, PH.D., Research Associate in Biological Chemistry (appointment expired September 30, 1963).

ELIZABETH R. SIMONS, PH.D., Research Associate in Biological Chemistry.

ROBERT G. SPIRO, M.D., Research Associate in Biological Chemistry (through December 31, 1963).

ANNE M. STOFFYN, PH.D., Research Associate in Biological Chemistry.

YASUO TAKAHASHI, M.D., PH.D., Research Associate in Biological Chemistry.

ALVIN R. TARLOV, M.D., Research Associate in Biological Chemistry.

ALISA TIETZ-DEVIR, PH.D., Research Associate in Biological Chemistry.

MARVIN H. WINKLER, PH.D., Research Associate in Biological Chemistry.

ROBERT L. JUNGAS, PH.D., Instructor in Biological Chemistry.

HENRY PAULUS, PH.D., Instructor in Biological Chemistry (through December 31, 1963).

ELVERA ALGERI GLASS, S.B., Assistant in Biological Chemistry.

KOICHI MORITA, B.PHARM., Assistant in Biological Chemistry (appointment expired January 15, 1964).

TETSURO ABE, M.D., Research Fellow in Biological Chemistry.

HARVARD MEDICAL SCHOOL

- BABATUNDE K. ADADEVOH, M.B., B.S., Research Fellow in Biological Chemistry.
- AMAR N. BHADURI, PH.D., Research Fellow in Biological Chemistry (from September 1, 1963).
- REINHART B. BILLIAR, PH.D., Research Fellow in Biological Chemistry (from September 1, 1963).
- A. HUNTLEY BLAIR, PH.D., Research Fellow in Biological Chemistry (from November 1, 1963).
- ANDREW H. T. CHEUNG, PH.D., Research Fellow in Biological Chemistry (through August 31, 1963).
- MARTIN COLODZIN, M.D., Research Fellow in Biological Chemistry.
- NEAL W. CORNELL, PH.D., Research Fellow in Biological Chemistry (from November 1, 1963).
- GARY R. CRAVEN, PH.D., Research Fellow in Biological Chemistry (appointment expired August 31, 1963).
- CYRUS R. CREVELING, PH.D., Research Fellow in Biological Chemistry.
- RICHARD C. DAVIES, A.B., Research Fellow in Biological Chemistry (from September 1, 1963).
- CHARLES H. DOERING, PH.D., Research Fellow in Biological Chemistry (from October 1, 1963).
- JOSEPH N. FISHER, JR., M.D., Research Fellow in Biological Chemistry (from September 1, 1963).
- HAROLD M. FLOWERS, PH.D., Research Fellow in Biological Chemistry (appointment expired September 30, 1963).
- THOMAS J. GAFFNEY, PH.D., Research Fellow in Biological Chemistry (from October 1, 1963).
- MARY C. GLICK, PH.D., Research Fellow in Biological Chemistry (appointment expires February 29, 1964).
- ANUND ANDREAS HALLEN, M.D., Research Fellow in Biological Chemistry (appointment expired September 30, 1963).
- SHIN-ICHI HAYASHI, M.D., Research Fellow in Biological Chemistry.
- REGINALD C. HUGHES, PH.D., Research Fellow in Biological Chemistry (appointment expired December 31, 1963).

BIOLOGICAL CHEMISTRY

BIRTE KAGI, MAG.SCI., Research Fellow in Biological Chemistry (from November 1, 1963).

VIRENDRA KAMAT, PH.D., Research Fellow in Biological Chemistry.

HARRY KARAVOLAS, PH.D., Research Fellow in Biological Chemistry (from September 15, 1963).

PHILIP C. KELLEHER, M.D., Research Fellow in Biological Chemistry (appointment expired July 31, 1963).

JAMES P. KOCH, M.D., Research Fellow in Biological Chemistry.

HELEN M. KORCHAK, PH.D., Research Fellow in Biological Chemistry.

GERALD S. LEVEY, M.D., Research Fellow in Biological Chemistry.

WILLIAM C. LOVE, PH.D., Research Fellow in Biological Chemistry.

HOWARD S. MAKER, M.D., Research Fellow in Biological Chemistry.

HERBERT L. MAYER, PH.D., Research Fellow in Biological Chemistry.

TIRTHAHALLI S. MURTHY, PH.D., Research Fellow in Biological Chemistry.

NASIR-UD-DIN, PH.D., Research Fellow in Biological Chemistry (from September 1, 1963).

DAVID S. NEWCOMBE, M.D., Research Fellow in Biological Chemistry.

TOSHIAKI OSAWA, DR.PHARMA.SCI., Research Fellow in Biological Chemistry.

RAVINDRA P. PATEL, PH.D., Research Fellow in Biological Chemistry (from September 1, 1963).

ROMANO PIRAS, PH.D., Research Fellow in Biological Chemistry (from September 1, 1963).

ERIKA E. RANDERATH, PH.D., Research Fellow in Biological Chemistry.

KENNETH R. READ, PH.D., Research Fellow in Biological Chemistry (appointment expired January 31, 1964).

JOHN F. P. RICHTER, PH.D., Research Fellow in Biological Chemistry (appointment expired September 30, 1963).

HARVARD MEDICAL SCHOOL

JAMES F. RIORDAN, PH.D., Research Fellow in Biological Chemistry.

EMANUEL J. SHECHTER, PH.D., Research Fellow in Biological Chemistry.

LUIS SOBREVILLA, M.D., Research Fellow in Biological Chemistry.

KEIKO TOKUYAMA, D.Sc., Research Fellow in Biological Chemistry.

PAUL A. WEINHOLD, PH.D., Research Fellow in Biological Chemistry (from September 1, 1963).

RONALD B. WILCOX, PH.D., Research Fellow in Biological Chemistry.

NEIL R. WILLIAMS, PH.D., Research Fellow in Biological Chemistry (appointment expired September 30, 1963).

EDMUND M. WISE, JR., PH.D., Research Fellow in Biological Chemistry.

ROBERT ZAND, PH.D., Research Fellow in Biological Chemistry.

NICHOLAS COZZARELLI, A.B., Teaching Fellow in Biological Chemistry.

JAMES ELLINGBOE, B.S., Teaching Fellow in Biological Chemistry.

ZACH W. HALL, A.B., Teaching Fellow in Biological Chemistry.

Affiliated:

FINN BRUDEVOLD, D.D.S., A.M. (hon.), Professor of Dentistry at the Forsyth Dental Infirmary.

FREDRICK J. STARE, PH.D., M.D., Professor of Nutrition, S.P.H.

D. MARK HEGSTED, PH.D., Associate Professor of Nutrition, S.P.H.

GEORGE NICHOLS, JR., M.D., Associate Clinical Professor of Medicine and Associate Dean for Academic Affairs.

JAMES H. SHAW, PH.D., Associate Professor of Biological Chemistry in the School of Dental Medicine.

Required Course

BIOLOGICAL CHEMISTRY A. *First Year.* — During the first semester the lectures in Biological Chemistry discuss the chemical components

BIOLOGICAL CHEMISTRY

of living matter and the metabolic processes common to all tissues. Laboratory work deals with the physical and chemical concepts necessary to an understanding of living processes, and the fundamental chemical characteristics of biological compounds and enzymatic reactions.

During the second semester the lectures and laboratory work in biochemistry are interwoven with those given by the Departments of Physiology and Anatomy. In the first six weeks the Department of Biological Chemistry will deal with the following topics: inorganic chemical composition of body tissues and fluids and physical chemical factors governing their control: the transport of O_2 and CO_2 in the blood and acid-base balance. The gastro-intestinal and endocrine systems will be studied in the second five-week period. The Department will present the chemical processes involved in digestion and absorption; the intermediary metabolism of the liver; the chemistry and metabolism of cholesterol, the bile acids, and the steroid hormones; and the regulatory effects of hormones in general on metabolism. In the third six-week period, which explores the neuro-sciences, certain special aspects of the chemistry and metabolism of brain and nerve are the contributions of the Department of Biological Chemistry.

FIRST YEAR

HOURS

Lectures and laboratory work. Dts. ALPERS, BALL, BLOUT, COMB, ENGEL, FOLCH-PI, GERGELEY, HAGERMAN, HAUSER, HEGSTED, JEANLOZ, KALCKAR, KARNOVSKY, KENNEDY, KNOX, LeBARON, LIN, PAULUS, PEARLMAN, RIEDER, SOLOMON, STARE, VILLEE, and WALLACH.

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Fourth Year Elective Courses

20. Biological Chemistry and Nutrition. An opportunity is offered for special study in advanced biological chemistry and nutrition for one or more months. Arrangement for work may be made by consultation with members of the staff.
21. Use of Isotopes in Biological Research. Dr. A. K. SOLOMON. Investigation not less than one full course. For admission consult Dr. SOLOMON directly. (Same course as Physiology 21).

HARVARD MEDICAL SCHOOL

Voluntary Courses

30. Research. The Department welcomes students who wish to carry on research with a staff member. Consult the Department Head or an appropriate staff member for details.
31. Clinical Nutrition. Dr. STARE and ASSOCIATES. Time to be arranged.
32. Biochemical Techniques. Half course (fall term). Drs. BEHRMAN, BETHUNE, BLOUT, COLLIN, ENGEL, HAY, JARDETSKY, JEANLOZ, PEARLMAN, VALLEE, WALLACH, WEBSTER, and OTHERS. Wednesday afternoon and Saturday morning. Lectures and laboratory. Prerequisites: Biochemistry A or its equivalent. Primary emphasis is on modern physical methods. Topics include nuclear magnetic resonance, optical rotatory dispersion, spectroscopy, ultracentrifugation, electrophoresis, isotope tracer methods, chromatography, and related subjects.
33. Advanced Biochemistry. Half course (spring term). MEMBERS OF THE DEPARTMENT. Three hours a week, time to be arranged. Lectures and assigned reading. Prerequisites: Biochemistry A or its equivalent. The subject matter will be covered in a three year cycle, with the following areas considered in successive years: (1) Structure and function of proteins and nucleic acids. (2) Chemistry and metabolism of carbohydrates and lipids. (3) Biological control mechanisms (to be given in Spring, 1964, jointly with the Department of Bacteriology and Immunology).

DENTAL MEDICINE

DENTAL MEDICINE

Opportunities for voluntary and elective work are available at the School of Dental Medicine for third and fourth year medical students. Course material will be designed to meet individual needs where possible. Instruction will be on a tutorial basis. Make all inquiries at the Dean's Office, School of Dental Medicine.

Voluntary Course

30. Diagnosis of Oral Diseases. Dr. WEISBERGER and STAFF. November and December, Monday through Friday, 10 to 12 a.m. at the Dental Clinic, M.G.H. Open to third and fourth year students. Limited to three students.

HARVARD MEDICAL SCHOOL

DEPARTMENT OF DERMATOLOGY

THOMAS B. FITZPATRICK, M.D., PH.D., Edward Wigglesworth
Professor of Dermatology, and Head of the Department.

MAURICE M. TOLMAN, M.D., Clinical Professor of Dermatology.

IRVIN H. BLANK, PH.D., Assistant Professor of Dermatology at
the Massachusetts General Hospital.

ROBERT D. GRIESEMER, M.D., Assistant Professor of Dermatology
at the Massachusetts General Hospital.

GEORGE SZABO, PH.D., Assistant Professor of Anatomy in the
Department of Dermatology.

GEORGE F. WILGRAM, M.D., PH.D., Assistant Professor of Derma-
tology.

IRWIN M. FREEDBERG, M.D., Associate in Dermatology at the Beth
Israel Hospital.

RUTH K. FREINKEL, M.D., Associate in Dermatology.

WALTER F. LEVER, M.D., Lecturer on Dermatology.

RUTH MITCHELL, M.B., CH.B., Visiting Lecturer on Dermatology
(from January 1, 1964).

IEMASA NAKAMURA, M.D., Visiting Lecturer on Dermatology
(October 1 through December 31, 1963).

WALTER QUEVEDO, JR., PH.D., Visiting Lecturer on Dermatology
(from November 1, 1963).

JACK COHEN, PH.D., Research Associate in Dermatology (from
September 1, 1963).

MADHUKAR A. PATHAK, PH.D., Research Associate in Dermatology.

ROBERT SCHEUPLEIN, PH.D., Research Associate in Dermatology.

JOHN ADAMS, JR., M.D., Instructor in Dermatology.

HOWARD P. BADEN, M.D., Instructor in Dermatology.

WILLIAM L. CURWEN, M.D., Instructor in Dermatology.

NICHOLAS J. FIUMARA, M.D., M.P.H., Instructor in Dermatology
(from November 1, 1963).

WILLIAM R. HILL, JR., M.D., Instructor in Dermatology.

CHARLES S. KEUPER, M.D., Instructor in Dermatology.

RICHARD MASTERS, M.D., Instructor in Dermatology (on leave
September 1, 1963 through June 30, 1964).

DERMATOLOGY

PHILIP L. MCCARTHY, M.D., Instructor in Dermatology.
ROBERT F. TILLEY, M.D., Instructor in Dermatology.
LEROY D. AARONSON, M.D., Assistant in Dermatology.
JOSEPH ALBERT, M.D., Assistant in Dermatology.
EARL A. GLICKLICH, M.D., Assistant in Dermatology.
MILTON E. HELMAN, M.D., Assistant in Dermatology.
BURNHAM E. LAMKINS, M.D., Assistant in Dermatology.
MYRON H. MATZ, M.D., Assistant in Dermatology.
ARTHUR S. SPANGLER, M.D., Assistant in Dermatology.
JOHN M. ARNOLD, PH.D., Research Fellow in Dermatology (August 1 through August 31, 1963).
ARTHUR EISEN, M.D., Research Fellow in Dermatology.
RICHARD F. PASSEY, PH.D., Research Fellow in Dermatology (from January 1, 1964).
ROBERT B. SCOGGINS, M.D., Research Fellow in Dermatology.
HITOSHI TAKAHASHI, M.D., PH.D., Research Fellow in Dermatology (appointment expired December 31, 1963).
SHING Y. YIP, M.D., Research Fellow in Dermatology.

Required Course

DERMATOLOGY A. *Third Year.*—Instruction consists of four lectures and a clinical clerkship in the dermatology outpatient clinic and dermatology wards of the Massachusetts General Hospital. The course attempts to provide a basic knowledge of the cytology, biochemistry and physiology of normal skin and the pathologic physiology of various diseases involving the skin.

Physical diagnosis (distribution pattern, configuration and morphology of skin lesions) is illustrated with the aid of color transparencies as well as patients. In addition, the student is instructed in the use of some laboratory aids to diagnosis (mycologic examination, dermal pathology, etc.). Emphasis is placed on recognition of skin diseases and cutaneous manifestations of systemic diseases.

THIRD YEAR

HOURS

Lectures. Dr. FITZPATRICK and ASSOCIATES. H.M.S. Four lectures. 4
Section work. Clinical Dermatology. Dr. FITZPATRICK and ASSO-

HARVARD MEDICAL SCHOOL

CIATES. M.G.H. Each student attends ten or eleven sessions (clinics and ward rounds) of three hours each.

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Fourth Year Elective Course

1. Clinical Clerkship. Dr. FITZPATRICK and ASSOCIATES. M.G.H. Whole course, all day, for two weeks. Limited to three students each month.

MEDICINE

DEPARTMENT OF MEDICINE

WALTER BAUER, M.D., A.M. (hon.), Jackson Professor of Clinical Medicine, and Head of the Department at the Massachusetts General Hospital (died December 2, 1963).

ROBERT H. EBERT, D.PHIL., M.D., Jackson Professor of Clinical Medicine and Head of the Department at the Massachusetts General Hospital (from January 1, 1964).

MAXWELL FINLAND, M.D., George Richards Minot Professor of Medicine, and Head of the Department at the Boston City Hospital.

HOWARD H. HIATT, M.D., Herrman Ludwig Blumgart Professor of Medicine and Head of the Department at the Beth Israel Hospital.

GEORGE W. THORN, M.D., M.A. (hon.), LL.D. (hon.), Sc.D. (hon.), DR. OF MED. (hon.), Hersey Professor of the Theory and Practice of Physic, and Head of the Department at the Peter Bent Brigham Hospital.

PAUL C. ZAMECNIK, M.D., Collis P. Huntington Professor of Oncologic Medicine, and Director of the J. Collins Warren Laboratories of the Huntington Memorial Hospital.

WILLIAM B. CASTLE, M.D., S.M. (hon.), M.D. (hon.), S.D. (hon.), Francis Weld Peabody Faculty Professor of Medicine.

LEWIS DEXTER, M.D., Clinical Professor of Medicine, and Tutor in Medicine.

RICHARD P. STETSON, M.D., Clinical Professor of Medicine (retired December 31, 1963).

THOMAS A. WARTHIN, M.D., Clinical Professor of Medicine.

LOUIS WOLFF, M.D., Clinical Professor of Medicine.

BENJAMIN ALEXANDER, M.D., Associate Professor of Medicine at the Beth Israel Hospital (on sabbatical leave September 1, 1963 through August 31, 1964).

EDWARD F. BLAND, M.D., Associate Clinical Professor of Medicine.

HARVARD MEDICAL SCHOOL

- CHARLES S. DAVIDSON, M.D., C.M., A.M. (hon.), Associate Professor of Medicine.
- LAURENCE B. ELLIS, M.D., Associate Clinical Professor of Medicine.
- KENDALL EMERSON, JR., M.D., Associate Clinical Professor of Medicine.
- EUGENE C. EPPINGER, M.D., Associate Clinical Professor of Medicine, and Assistant Dean of the Faculty of Medicine for Courses for Graduates.
- A. STONE FREEDBERG, M.D., Associate Professor of Medicine at the Beth Israel Hospital.
- FRANK H. GARDNER, M.D., Associate Clinical Professor of Medicine.
- SAMUEL L. GARGILL, M.D., Associate Clinical Professor of Medicine.
- SEYMOUR J. GRAY, M.D., PH.D., Associate Clinical Professor of Medicine (on leave September 1, 1963 through June 30, 1964).
- SIDNEY H. INGBAR, M.D., Associate Professor of Medicine.
- ALFRED KRANES, M.D., Associate Clinical Professor of Medicine.
- ALEXANDER LEAF, M.D., Associate Professor of Medicine at the Massachusetts General Hospital, and Chairman of the Executive Committee of the Departments of Medicine.
- JOHN P. MERRILL, M.D., Associate Clinical Professor of Medicine.
- GEORGE NICHOLS, JR., M.D., Associate Clinical Professor of Medicine, and Associate Dean of the Faculty of Medicine for Academic Affairs.
- MARIAN W. ROPES, M.D., Associate Clinical Professor of Medicine.
- JESSE F. SCOTT, M.D., A.M. (hon.), Associate Professor of Oncologic Medicine.
- JOHN B. STANBURY, M.D., Associate Clinical Professor of Medicine.
- BERT L. VALLEE, M.D., A.M. (hon.), Associate Professor of Medicine.
- LOUIS ZETZEL, M.D., Associate Clinical Professor of Medicine.

MEDICINE

- PAUL M. ZOLL, M.D., Associate Clinical Professor of Medicine.
- WALTER H. ABELMANN, M.D., Assistant Professor of Medicine.
- ALAN C. AISENBERG, M.D., PH.D., Assistant Professor of Medicine at the Massachusetts General Hospital.
- MARK D. ALTSCHULE, M.D., Assistant Clinical Professor of Medicine.
- THEODORE L. BADGER, M.D., Assistant Clinical Professor of Medicine.
- ANTHONY F. BARTHOLOMAY, M.A., S.D., Assistant Professor of Mathematical Biology in the Department of Medicine.
- THEODORE B. BAYLES, M.D., Assistant Clinical Professor of Medicine.
- WILLIAM S. BECK, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital (on leave January 1 through April 30, 1964).
- FREDERICK S. BIGELOW, M.D., Assistant Clinical Professor of Medicine.
- GEORGE F. CAHILL, JR., M.D., Assistant Professor of Medicine.
- EARLE M. CHAPMAN, M.D., Assistant Clinical Professor of Medicine.
- HARRY A. DEROW, M.D., Assistant Clinical Professor of Medicine.
- RICHARD A. FIELD, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.
- ANNE P. FORBES, M.D., Assistant Clinical Professor of Medicine.
- NORBERT FREINKEL, M.D., Assistant Professor of Medicine.
- DALE G. FRIEND, M.D., Assistant Professor of Medicine at the Peter Bent Brigham Hospital.
- RICHARD GORLIN, M.D., Assistant Professor of Medicine.
- JEROME GROSS, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.
- WILLIAM E. HARTNETT, M.D., Assistant Professor of Mathematical Biology in the Department of Medicine and Tutor in Mathematical Biology (from September 1, 1963).
- VICTOR D. HERBERT, M.D., Assistant Professor of Medicine, and Tutor in Medical Science.

HARVARD MEDICAL SCHOOL

FREDERIC L. HOCH, M.D., Assistant Professor of Medicine, and Tutor in Medical Science.

DAVID HURWITZ, M.D., Assistant Clinical Professor of Medicine.

KURT J. ISSELBACHER, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

JAMES H. JANDL, M.D., Assistant Professor of Medicine.

STEPHEN M. KRANE, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

GEORGE S. KURLAND, M.D., Assistant Clinical Professor of Medicine, and Tutor in Medical Science.

JACOB LERMAN, M.D., Assistant Clinical Professor of Medicine.

HAROLD D. LEVINE, M.D., Assistant Clinical Professor of Medicine.

ARTHUR J. LINENTHAL, M.D., Assistant Clinical Professor of Medicine.

JOHN W. LITTLEFIELD, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

DAVID LITTMANN, M.D., Assistant Clinical Professor of Medicine.

ROBERT B. LOFTFIELD, PH.D., Assistant Professor of Organic Chemistry in the Department of Medicine at the Massachusetts General Hospital.

FRANCIS C. LOWELL, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

JANET W. MCARTHUR, M.D., S.D. (hon.), Assistant Clinical Professor of Medicine.

ALEXANDER MARBLE, M.D., Assistant Clinical Professor of Medicine.

GORDON S. MYERS, M.D., Assistant Clinical Professor of Medicine.

JOSEPH E. F. RISEMAN, M.D., Assistant Clinical Professor of Medicine.

CHARLES L. SHORT, M.D., Assistant Clinical Professor of Medicine.

LLOYD H. SMITH, JR., M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

MORTON N. SWARTZ, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

MEDICINE

PHILIP TROEN, M.D., Assistant Professor of Medicine, and Tutor in Medical Science.

WARREN E. C. WACKER, M.D., Assistant Professor of Medicine.

ARTHUR L. WATKINS, M.D., Assistant Clinical Professor of Medicine.

STANFORD WESSLER, M.D., Assistant Professor of Medicine at the Beth Israel Hospital.

JOHN B. WEST, M.D., PH.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

KENNETH T. BIRD, M.D., Lecturer on Medicine (from January 1, 1964).

JOSEPH W. GARDELLA, M.D., Lecturer on Medicine and Associate Dean of the Faculty of Medicine for Student Affairs.

HARRIET L. HARDY, M.D., Lecturer on Medicine.

JOHN H. KNOWLES, M.D., Lecturer on Medicine.

DAVID W. ALLEN, M.D., Associate in Medicine.

GEORGE E. ALTMAN, M.D., Clinical Associate in Medicine.

KARL F. AUSTEN, M.D., Associate in Medicine at the Massachusetts General Hospital.

C. CABELL BAILEY, M.D., Clinical Associate in Medicine.

MYLES P. BAKER, M.D., Clinical Associate in Medicine.

WILLIAM H. BAKER, M.D., Clinical Associate in Medicine.

BENJAMIN M. BANKS, M.D., Clinical Associate in Medicine.

SAMUEL B. BEASER, M.D., Clinical Associate in Medicine.

RICHARD A. BLOOMFIELD, M.D., Clinical Associate in Medicine.

NANCY L. R. BUCHER, M.D., Clinical Associate in Medicine.

PHIN COHEN, M.D., Associate in Medicine.

PERRY J. CULVER, M.D., Clinical Associate in Medicine, and Assistant Dean of the Faculty of Medicine for Admission.

ALBERT I. C. DE FRIEZ, M.D., Clinical Associate in Medicine.

LESLIE J. DEGROOT, M.D., Associate in Medicine at the Massachusetts General Hospital.

DANIEL S. ELLIS, M.D., Clinical Associate in Medicine.

HOWARD S. FRAZIER, PH.D., M.D., Associate in Medicine at the Massachusetts General Hospital.

PAUL FREMONT-SMITH, M.D., Clinical Associate in Medicine.

HARVARD MEDICAL SCHOOL

ALLAN L. FRIEDLICH, M.D., Clinical Associate in Medicine.

WALTER T. GOODALE, M.D., Clinical Associate in Medicine.

WARREN R. GUILD, M.D., Associate in Medicine at the Peter Bent Brigham Hospital.

JOHN G. HARTER, M.D., Clinical Associate in Medicine.

FREDERICK T. HATCH, M.D., Associate in Medicine at the Massachusetts General Hospital.

ROGER B. HICKLER, M.D., Associate in Medicine.

RITA M. KELLEY, M.P.H., M.D., Clinical Associate in Medicine.

BERNARD KLIMAN, M.D., Associate in Medicine at the Massachusetts General Hospital.

CHARLES S. LIEBER, M.D., Associate in Medicine (resigned December 31, 1963).

DONALD B. MARTIN, M.D., Associate in Medicine at the Massachusetts General Hospital.

DUDLEY MERRILL, M.D., Clinical Associate in Medicine.

DAVID G. NATHAN, M.D., Associate in Medicine.

LOT B. PAGE, M.D., Associate in Medicine at the Massachusetts General Hospital.

LIBERTO P. PECHET, M.D., Associate in Medicine at the Beth Israel Hospital.

MAURICE M. PECHET, PH.D., M.D., Associate in Medicine at the Massachusetts General Hospital.

CURTIS PROUT, M.D., Clinical Associate in Medicine.

HERBERT A. RAVIN, M.D., Associate in Medicine (resigned September 30, 1963).

HERBERT A. SELENKOW, M.D., Associate in Medicine at the Peter Bent Brigham Hospital, and Tutor in Medical Science.

WILLIAM J. SHRIBER, M.D., Clinical Associate in Medicine.

PHILIP J. SNODGRASS, M.D., Associate in Medicine and Henry A. and Camillus Christian Fellow in Medicine.

SAMUEL STEARNS, M.D., Clinical Associate in Medicine.

MYRON STEIN, M.D., Associate in Medicine.

J. SYDNEY STILLMAN, JR., M.D., Clinical Associate in Medicine.

JOHN D. STOECKLE, M.D., Associate in Medicine at the Massachusetts General Hospital.

MEDICINE

- GEORGE P. STURGIS, M.D., Clinical Associate in Medicine.
MELVIN I. STURNICK, M.D., Clinical Associate in Medicine.
JAMES L. TULLIS, M.D., Clinical Associate in Medicine.
ROE E. WELLS, JR., M.D., Associate in Medicine.
CONGER WILLIAMS, M.D., Clinical Associate in Medicine.
NORMAN ZAMCHECK, M.D., Clinical Associate in Medicine.
THOMAS C. CHALMERS, JR., M.D., Lecturer on Medicine.
JOSEPH F. DINGMAN, M.D., Lecturer on Medicine.
ALFRED GELLHORN, M.D., Visiting Lecturer on Medicine (December 9 through December 13, 1963).
MILTON W. HAMOLSKY, M.D., Lecturer on Medicine.
CLARK W. HEATH, M.D., Lecturer on Medicine.
YALE J. KATZ, PH.D., Visiting Lecturer on Medicine (appointment expired December 31, 1963).
ORA KEDEM, PH.D., Lecturer on Biophysics in the Department of Medicine (appointment terminated November 30, 1963).
ALBERT O. SEELER, M.D., Lecturer on Medicine.
MAURICE B. STRAUSS, M.D., Lecturer on Medicine.
SAUL ARONOW, PH.D., Research Associate in Medicine.
GUY O. BARNETT, M.D., Research Associate in Medicine.
GORDON L. BROWNELL, PH.D., Research Associate in Medicine.
RAFAEL CAMERINI-DAVALOS, M.D., DR.P.H., Research Associate in Medicine.
ROBERT H. CRAIG, M.D., Research Associate in Medicine.
WILLIAM H. ELLETT, M.S., Research Associate in Medicine.
ARACELI M. ENGEL, PH.D., Research Associate in Medicine.
KEIICHIRO FUWA, PH.D., Research Associate in Medicine.
THOMAS G. GABUZDA, M.D., Research Associate in Medicine.
RICHARD GREENBAUM, PH.D., Research Associate in Sociology in the Department of Medicine.
ION GRESSER, M.D., Research Associate in Medicine (from January 1, 1964).
FLORENCE W. HAYNES, PH.D., Research Associate in Medicine.
ABDUL J. IMARI, M.D., Research Associate in Medicine.
MARIO A. INCHIOSA, JR., PH.D., Research Associate in Medicine.
JORGEN G. JACOBSEN, M.D., Research Associate in Medicine.

HARVARD MEDICAL SCHOOL

JEREMIAS H. R. KAEGI, M.D., Research Associate in Medicine
(from October 1, 1963).

BARBARA W. KALCKAR, PH.D., Research Associate in Bacteriology
and Immunology in the Department of Medicine.

SHELBY KASHKET, PH.D., Research Associate in Medicine.

MITSUKO T. LAFORET, M.D., Research Associate in Medicine.

MARVIN R. LAMBORG, PH.D., Research Associate in Medicine.

DAVID P. LAULER, M.D., Research Associate in Medicine.

TING-KAI LI, M.D., Research Associate in Medicine.

DONALD E. OKEN, M.D., Research Associate in Medicine.

LILLIAN POTHIER, M.D., Research Associate in Medicine.

FRANK F. RICHARDS, M.D., Research Associate in Medicine (from
January 15, 1964).

CALVIN A. SARAVIS, PH.D., Research Associate in Biological Chem-
istry in the Department of Medicine.

MARY J. SPIRO, PH.D., Research Associate in Medicine.

MARY L. STEPHENSON, PH.D., Research Associate in Medicine.

HELENA WONG (SHEN), M.D., Research Associate in Medicine.

CHUAN-TAO YU, PH.D., Research Associate in Medicine (resigned
January 31, 1964).

LEONA R. NORMAN ZARSKY, M.D., Research Associate in Medicine.

AMERICO ABBRUZZESE, M.D., Instructor in Medicine.

IRVING P. ACKERMAN, M.D., Instructor in Medicine.

RONALD A. ARKY, M.D., Instructor in Medicine.

VICTOR G. BALBONI, M.D., Instructor in Medicine.

EDGAR D. BELL, JR., M.D., Instructor in Medicine.

PATRICIA H. BENEDICT, M.D., Instructor in Medicine.

DANIEL S. BERNSTEIN, M.D., Instructor in Medicine.

KENNETH T. BIRD, M.D., Instructor in Medicine (through De-
cember 31, 1963).

KURT J. BLOCH, M.D., Instructor in Medicine.

MORTON G. BROWN, M.D., Instructor in Medicine.

ROBERT E. BROWNLEE, M.D., Instructor in Medicine.

JOHN B. CADIGAN, JR., M.D., Instructor in Medicine.

EDMUND J. CALLAHAN, 3RD, M.D., Instructor in Medicine.

WALTER H. CASKEY, M.D., Instructor in Medicine.

MEDICINE

- JOHN W. CASS, JR., Ph.D., M.D., Instructor in Medicine.
AUGUSTUS T. CROCKER, M.D., Instructor in Medicine.
SETH C. CROCKER, M.D., Instructor in Medicine.
JAMES F. CUMMINS, M.D., Instructor in Medicine.
BRIANT L. DECKER, M.D., Instructor in Medicine.
ROMAN W. DESANCTIS, M.D., Instructor in Medicine.
DANIEL DEYKIN, M.D., Instructor in Medicine.
LAURENCE E. EARLEY, M.D., Instructor in Medicine and Tutor in Medical Science.
ERIC ENGEL, M.D., Instructor in Medicine (appointment expired July 31, 1963).
ALVIN ESSIG, M.D., Instructor in Medicine.
DANIEL D. FEDERMAN, M.D., Instructor in Medicine.
JAMES J. FEENEY, M.D., Instructor in Medicine and Tutor in Medical Science.
JEROME W. FISCHBEIN, M.D., Instructor in Medicine.
GERALD S. FOSTER, M.D., Instructor in Medicine.
WILLIAM FRANKLIN, M.D., Instructor in Medicine.
ANDREW G. FRANTZ, M.D., Instructor in Medicine.
RALPH S. GOLDSMITH, M.D., Instructor in Medicine (from August 1, 1963).
MEHRAN GOULIAN, M.D., Instructor in Medicine.
JOHN R. GRAHAM, M.D., Instructor in Medicine.
MORTIMER S. GREENBERG, M.D., Instructor in Medicine.
JOSEPH S. GRYBOSKI, M.D., Instructor in Medicine.
VICTOR GUREWICH, M.D., Instructor in Medicine.
EDGAR HABER, M.D., Instructor in Medicine (from August 1, 1963).
EDWARD B. HAGER, M.D., Instructor in Medicine.
ARTHUR P. HALL, M.D., Instructor in Medicine.
THOMAS C. HALL, M.D., Instructor in Medicine.
REED HARWOOD, M.D., Instructor in Medicine.
DOROTHEA E. W. HELLMAN, M.D., Instructor in Medicine.
EMANUEL S. HELLMAN, M.D., Instructor in Medicine.
EDGAR C. HENSHAW, M.D., Instructor in Medicine.
MANUEL G. HERRERA-ACENA, M.D., Instructor in Medicine.

HARVARD MEDICAL SCHOOL

ROBERT B. HOLDEN, M.D., Instructor in Medicine.
LANCING C. HOSKINS, M.D., Instructor in Medicine.
JAMES H. JACKSON, M.D., Instructor in Medicine.
HARRY S. JACOB, M.D., Instructor in Medicine.
BERNARD M. JACOBSON, M.D., Instructor in Medicine.
H. WALTER JONES, JR., M.D., Instructor in Medicine.
ROBERT H. JONES, M.D., Instructor in Medicine.
ALAN L. KAITZ, M.D., Instructor in Medicine.
WILLIS R. KEENE, M.D., Instructor in Medicine.
MELVIN I. KLAYMAN, M.D., Instructor in Medicine.
JEROME O. KLEIN, M.D., Instructor in Medicine.
ALLAN KLIMAN, M.D., Instructor in Medicine.
JULIUS KRITZMAN, M.D., Instructor in Medicine.
MARK F. LESSES, M.D., Instructor in Medicine.
ARTHUR J. LOCKHART, M.D., Instructor in Medicine.
JASON E. LUCAS, D.M.D., M.D., Instructor in Medicine.
GEORGE W. LYNCH, M.D., Instructor in Medicine.
JOSEPH E. MACKIE, M.D., Instructor in Medicine.
FARAHE MALOOF, M.D., Instructor in Medicine.
JAMES S. MANSFIELD, M.D., Instructor in Medicine.
EDWIN P. MAYNARD, 3RD, M.D., Instructor in Medicine.
L. TILLMAN MCDANIEL, M.D., Instructor in Medicine.
WILLIAM F. MCNEELY, M.D., Instructor in Medicine.
JOSEPH M. MILLER, M.D., Instructor in Medicine.
JOHN A. MILLS, M.D., Instructor in Medicine.
AVARD M. MITCHELL, PH.D., M.D., Instructor in Medicine.
ROBERT S. MORRISON, M.D., Instructor in Medicine.
HYMAN L. NATERMAN, M.D., Instructor in Medicine.
H. RICHARD NESSON, M.D., Instructor in Medicine.
THOMAS F. O'BRIEN, M.D., Instructor in Medicine.
CAREY M. PETERS, M.D., Instructor in Medicine.
ARTHUR S. PIER, JR., M.D., Instructor in Medicine.
GEORGE M. PIKE, M.D., Instructor in Medicine.
ROBERT S. PINALS, M.D., Instructor in Medicine.
WALTER W. POINT, 3RD, M.D., Instructor in Medicine.
MITCHELL T. RABKIN, M.D., Instructor in Medicine.

MEDICINE

- SEARLE B. REES, M.D., Instructor in Medicine.
WILLIAM A. RICHARDS, M.D., Instructor in Medicine.
DWIGHT R. ROBINSON, M.D., Instructor in Medicine.
SEYMOUR M. SABESIN, M.D., Instructor in Medicine.
ELLIOT L. SAGALL, M.D., Instructor in Medicine.
WALTER T. ST. GOAR, M.D., Instructor in Medicine.
GUILLERMO C. SANCHEZ, M.D., Instructor in Medicine.
ARTHUR A. SASAHARA, M.D., Instructor in Medicine.
GORDON A. SAUNDERS, M.D., Instructor in Medicine.
LAWRENCE SAXON, M.D., Instructor in Medicine.
JOSEPH H. SCHAFFER, M.D., Instructor in Medicine.
JOHN SCHULMAN, JR., M.D., Instructor in Medicine.
NORMAN J. SELVERSTONE, M.D., Instructor in Medicine.
JULIAN G. SNYDER, PH.D., M.D., Instructor in Medicine.
WILLIAM D. SOHIER, JR., M.D., Instructor in Medicine.
NORMAN S. STEARNS, M.D., Instructor in Medicine.
HAROLD J. STEIN, M.D., Instructor in Medicine.
SAMUEL W. STEIN, M.D., Instructor in Medicine.
LESTER A. STEINBERG, M.D., Instructor in Medicine.
JURGEN STEINKE, M.D., Instructor in Medicine.
LAWRENCE I. STELLAR, M.D., Instructor in Medicine.
LOUIS W. SULLIVAN, M.D., Instructor in Medicine.
ROBERT H. TALKOV, M.D., Instructor in Medicine.
DUNCAN P. THOMAS, M.B., B.S., Instructor in Medicine.
DONALD A. TUCKER, M.D., Instructor in Medicine.
DAVID D. ULMER, M.D., Instructor in Medicine, and Tutor in Medical Science.
JAMES E. C. WALKER, M.D., Instructor in Medicine and Tutor in Medical Science.
ARNOLD N. WEINBERG, M.D., Instructor in Medicine.
JOHN C. WELLS, JR., M.D., Instructor in Medicine.
OLGA S. WERMER, M.D., Instructor in Medicine.
EDWIN O. WHEELER, M.D., Instructor in Medicine.
BERTRAM M. WINER, M.D., Instructor in Medicine.
RICHARD WOLFF, M.D., Instructor in Medicine.
ROBERT B. ALLISON, M.D., Assistant in Medicine.

HARVARD MEDICAL SCHOOL

- ELIAS AMADOR, M.D., Assistant in Medicine.
ROGER P. ATWOOD, M.D., Assistant in Medicine.
GEORGE P. BAKER, JR., M.D., Assistant in Medicine.
JOHN M. BENNETT, M.D., Assistant in Medicine.
WILLIAM H. BIRCHARD, M.D., Assistant in Medicine.
ROBERT S. BLACKLOW, M.D., Assistant in Medicine.
LEONARD M. BORNSTEIN, M.D., Assistant in Medicine.
LEWIS E. BRAVERMAN, M.D., Assistant in Medicine.
CAESAR BRIEFER, JR., M.D., Assistant in Medicine.
ROBERT J. CAREY, M.D., Assistant in Medicine.
MELVIN H. CHALFEN, M.D., Assistant in Medicine.
JOSEPH E. COLEMAN, M.D., Assistant in Medicine and Tutor in
Medical Science.
ALICE B. CRANDELL, M.D., Assistant in Medicine.
FRANCIS J. DONOVAN, M.D., Assistant in Medicine.
HAROLD B. DULL, M.D., Assistant in Medicine.
ARTHUR B. FARFEL, M.D., Assistant in Medicine.
JOSEPH M. ST. F. FLANAGAN, M.B., CH.B., Assistant in Medicine.
KENNETH FREMONT-SMITH, M.D., Assistant in Medicine.
ROBERT K. FUNKHOUSER, M.D., Assistant in Medicine.
ARTHUR J. GARCEAU, M.D., Assistant in Medicine.
HERMAN J. GEIGER, M.D., Assistant in Medicine.
MARTIN A. GOLDMAN, M.D., Assistant in Medicine.
GARRY A. GOLDSTEIN, M.D., Assistant in Medicine.
JOEL C. GOLDTHWAIT, M.D., Assistant in Medicine.
KENNETH M. GRAHAM, M.D., Assistant in Medicine.
MICHAEL A. GRAVALLESE, JR., M.D., Assistant in Medicine.
EARLE I. HAMMER, M.D., Assistant in Medicine.
WILLIAM G. M. HARDISON, M.D., Assistant in Medicine.
ERNEST A. HIGGINS, JR., M.D., Assistant in Medicine.
JOHN W. KELLER, M.D., Assistant in Medicine.
OLIVER S. LELAND, JR., M.D., Assistant in Medicine.
DONALD McCAUGHAN, M.B., CH.B., Assistant in Medicine (from
September 1, 1963).
EDWARD W. MOORE, M.D., Assistant in Medicine.
AVRUM M. NOVITCH, M.D., Assistant in Medicine.

MEDICINE

- WOLFGANG W. OPPELT, M.D., Assistant in Medicine.
ROBERT K. OSBORNE, M.D., Assistant in Medicine.
DAVID PAINE, M.D., Assistant in Medicine.
GERALD R. PLOTKIN, M.D., Assistant in Medicine.
SHOLEM POSTEL, M.D., Assistant in Medicine.
RICHMOND PRESCOTT, M.D., Assistant in Medicine.
MUNRO H. PROCTOR, M.D., Assistant in Medicine.
EDWARD S. RENDALL, M.D., Assistant in Medicine.
ROBERT H. RESNICK, M.D., Assistant in Medicine.
JOHN B. RODGERS, JR., M.D., Assistant in Medicine.
RICHARD O. RUSSELL, JR., M.D., Assistant in Medicine.
THOMAS J. RYAN, M.D., Assistant in Medicine.
CHARLES A. SANDERS, M.D., Assistant in Medicine.
ALLAN I. SANDLER, M.D., Assistant in Medicine.
ROBERT H. SCHAPIRO, M.D., Assistant in Medicine (from January 1, 1964).
RICHARD P. SCHERMAN, M.D., Assistant in Medicine.
JAMES J. SIDD, M.D., Assistant in Medicine.
DAVID L. SINGER, M.D., Assistant in Medicine.
JOHN H. SISSON, M.D., Assistant in Medicine.
OSCAR E. STAROBIN, M.D., Assistant in Medicine.
ROBERT C. STEWART, M.D., Assistant in Medicine.
RICHARD H. THURM, M.D., Assistant in Medicine.
GERARD TREMBLAY, M.D., Assistant in Medicine.
ROBERT F. WILLIAMS, M.D., Assistant in Medicine (from January 1, 1964).
THORNE S. WINTER, 3RD, M.D., Assistant in Medicine.
FARUK M. YENEL, M.D., Assistant in Medicine (from September 1, 1963).
CARMEN ALONSO, PH.D., Research Fellow in Medicine.
CHESTER A. ALPER, M.D., Research Fellow in Medicine.
MANUEL L. ARCE, M.D., Research Fellow in Medicine (from September 1, 1963).
HAROLD ASHER, M.D., Research Fellow in Medicine.
RICHARD H. ASTER, M.D., Research Fellow in Medicine.

HARVARD MEDICAL SCHOOL

- DAVID BAYLINK, M.D., Research Fellow in Medicine (from August 1, 1963).
- ADIL E. BIRBARI, M.D., Research Fellow in Medicine (from September 1, 1963).
- DONALD L. BORNSTEIN, M.D., Research Fellow in Medicine (appointment expired December 31, 1963).
- EDWARD B. BRADLEY, M.D., Research Fellow in Medicine.
- JACK BRAUNWALD, M.D., Research Fellow in Medicine.
- MARIE-HELENE M. BUC, M.D., Research Fellow in Medicine (from October 1, 1963).
- CHARLES B. CARPENTER, M.D., Research Fellow in Medicine.
- MICHEL CHRETIEN, M.D., Research Fellow in Medicine.
- WILLIAM A. COBAIN, M.B., CH.B., Research Fellow in Medicine.
- LAWRENCE S. COHEN, M.D., Research Fellow in Medicine.
- MARTIN N. COHEN, M.D., Research Fellow in Medicine.
- JOHN R. COLLINS, M.D., Research Fellow in Medicine.
- CARLA M. DEL CARPIO, M.D., Research Fellow in Medicine.
- MONTSERRAT DE MIQUEL, PH.D., Research Fellow in Medicine.
- DAVID E. DRUM, M.D., Research Fellow in Medicine.
- JOHN T. DUNN, M.D., Research Fellow in Medicine.
- THEODORE C. EICKHOFF, M.D., Research Fellow in Medicine.
- HARVEY A. ELDER, M.D., Research Fellow in Medicine.
- WILLIAM C. ELLIOTT, M.D., Research Fellow in Medicine.
- JOHN C. FLETCHER, M.D., Research Fellow in Medicine.
- GEORGE FOSTIROPOULOS, M.D., Research Fellow in Medicine.
- JOHN J. FRANKS, M.D., Research Fellow in Medicine.
- ROBERT M. FRIEDLER, M.D., Research Fellow in Medicine.
- ROBERT E. FUISZ, M.D., Research Fellow in Medicine.
- ANTONIO M. GARCIA, M.D., Research Fellow in Medicine.
- JOSEPH P. GARVIN, M.D., Research Fellow in Medicine.
- KERSTIN G. C. GEZELIUS, PH.D., Research Fellow in Medicine.
- RICHARD J. GLASSOCK, M.D., Research Fellow in Medicine.
- RAY E. GLEASON, PH.D., Research Fellow in Mathematical Biology in the Department of Medicine (from September 1, 1963).
- CARLOS E. GOLDSTEIN, M.D., Research Fellow in Medicine.
- ALLAN D. GOODMAN, M.D., Research Fellow in Medicine.

MEDICINE

NORTON J. GREENBERGER, M.D., Research Fellow in Medicine.
ION GRESSER, M.D., Research Fellow in Medicine (through December 31, 1963).

CHARLES D. GURI, M.D., Research Fellow in Medicine.

DENNIS E. HYAMS, M.B., B.S., Research Fellow in Medicine.

CHUZO IIDA, Ph.D., Research Fellow in Medicine.

JUN ISHII, M.D., Research Fellow in Medicine.

DON P. JONES, M.D., Research Fellow in Medicine.

CHUICHI KAWAI, M.D., D.M.S., Research Fellow in Medicine.

MOHAMMAD A. KHAN, M.B., B.S., Research Fellow in Medicine.

RAJA N. KHURI, M.D., Research Fellow in Medicine (appointment expired December 31, 1963).

JAY W. KISLAK, M.D., Research Fellow in Medicine.

MICHAEL D. KLEIN, M.D., Research Fellow in Medicine.

GEORGE P. KOZAK, M.D., Research Fellow in Medicine (from January 1, 1964).

ROBERT A. KREISBERG, M.D., Research Fellow in Medicine.

ARTHUR S. KUNIN, M.D., Research Fellow in Medicine.

FRANCIS J. LANE, JR., M.D., Research Fellow in Medicine (appointment terminated December 31, 1963).

PATRICIA M. LEESON, M.B., Ch.B., Research Fellow in Medicine (from October 1, 1963).

ALFRED LEITNER, M.D., Research Fellow in Medicine.

JOSEPH M. LETTERI, M.D., Research Fellow in Medicine.

NORMAN S. LICHTENSTEIN, M.D., Research Fellow in Medicine.

GEORGE M. LYON, M.D., Research Fellow in Medicine.

VIRENDRA S. MATHUR, M.D., Research Fellow in Medicine.

KILMER S. MCCULLY, M.D., Research Fellow in Medicine (resigned September 15, 1963).

HUGH MILLER, M.D., Research Fellow in Medicine.

YUTAKA NAGAI, Ph.D., Research Fellow in Medicine.

CHARLES A. NAGANT DE DEUXCHAISNES, M.D., Research Fellow in Medicine.

EDWARD J. PARKER-WILLIAMS, M.D., Research Fellow in Medicine (appointment expired August 31, 1963).

HARVARD MEDICAL SCHOOL

- EINER S. PERMAN, PH.D., M.D., Research Fellow in Medicine
(from September 1, 1963).
- GEORGE B. PETERSEN, PH.D., Research Fellow in Medicine (from
January 1, 1964).
- DONALD P. PEYSER, M.D., Research Fellow in Medicine.
- ALDO PINCHERA, M.D., Research Fellow in Medicine.
- JOSEPH G. PITTMAN, M.D., Research Fellow in Medicine.
- MARC R. PLAYOUST, M.B., B.S., Research Fellow in Medicine
(resigned September 30, 1963).
- DANIEL POMETTA, M.D., Research Fellow in Medicine.
- DAVID L. PRESSMAN, M.D., Research Fellow in Medicine.
- PABLO PULIDO, M.D., Research Fellow in Medicine.
- KURT RANDERATH, DR. MED., Research Fellow in Medicine.
- LAWRENCE M. B. RAZAVI, M.D., B.S., Research Fellow in Medi-
cine.
- DAVID P. REED, M.D., Research Fellow in Medicine.
- VISHRAM B. REGE, M.D., Research Fellow in Medicine (resigned
September 30, 1963).
- PENTTI K. REISSELL, M.D., Research Fellow in Medicine (from
January 1, 1964).
- ALISTAIR G. C. RENWICK, M.B., CH.B., Research Fellow in Medi-
cine.
- MICHEL REVEL, M.D., PH.D., Research Fellow in Medicine.
- ROBERT F. RITCHIE, M.D., Research Fellow in Medicine.
- MORTON K. RUBINSTEIN, M.D., Research Fellow in Medicine.
- TAKAHIRO SAKAI, M.D., Research Fellow in Medicine (from
September 1, 1963).
- LUIS SANCHEZ-SICILIA, M.D., Research Fellow in Medicine (ap-
pointment expired January 31, 1964).
- PREM SAGAR SARIN, PH.D., Research Fellow in Medicine (from
September 1, 1963).
- LEWIS SASSE, M.D., Research Fellow in Medicine.
- STUART J. SAUNDERS, M.B., CH.B., Research Fellow in Medicine
(from November 1, 1963).
- DOUGLAS L. SCHATZ, M.D., Research Fellow in Medicine (from
October 1, 1963).

MEDICINE

GUIDO SCHOENENBERGER, M.D., Research Fellow in Medicine
(from August 1, 1963).

EUGENE SCHUPAK, M.D., Research Fellow in Medicine.

GEORGE C. SCHUSSLER, M.D., Research Fellow in Medicine (appointment expired August 31, 1963).

TREVOR W. SCOTT, PH.D., Research Fellow in Medicine (from October 1, 1963).

GEOFFREY W. G. SHARP, PH.D., Research Fellow in Medicine.

JEREMIAH E. SILBERT, M.D., Research Fellow in Medicine.

MICHAEL L. SIMENHOFF, M.B., CH.B., Research Fellow in Medicine.

GIRIRAJ B. SINGH, M.D., Research Fellow in Medicine (appointment expired August 31, 1963).

JOHN S. SOELDNER, M.D., Research Fellow in Medicine.

IVAN SPUZIC, M.D., PH.D., Research Fellow in Medicine (from October 1, 1963).

GEORGE STEINER, M.D., Research Fellow in Medicine.

KATHLEEN STRATTON, PH.D., Research Fellow in Medicine.

RICHARD R. STREIFF, M.D., Research Fellow in Medicine.

WILLIAM E. STROLE, JR., M.D., Research Fellow in Medicine
(from October 1, 1963).

ESTHER A. STROM, M.D., Research Fellow in Medicine.

MASAYA SUGIURA, M.D., Research Fellow in Medicine.

FRANK J. TAKACS, M.D., Research Fellow in Medicine.

GENZO TANABE, M.D., Research Fellow in Medicine.

LILY S. TASHIMA, PH.D., Research Fellow in Anatomy in the
Department of Medicine.

JEREMIEH G. TILLES, M.D., Research Fellow in Medicine.

KANJI TORIZUKA, M.D., Research Fellow in Medicine (resigned
November 30, 1963).

JOHN T. TRUMAN, M.D., Research Fellow in Medicine.

GUILLERMO URRUTIA, M.D., Research Fellow in Medicine.

GENTARO USUKU, M.D., Research Fellow in Medicine.

ANTHONY I. VAGNUCCI, M.D., Research Fellow in Medicine.

HARRIS W. VAYO, PH.D., Research Fellow in Mathematical Bi-

HARVARD MEDICAL SCHOOL

ology in the Department of Medicine (from September 1, 1963).

JEAN P. VON WARTBURG, M.D., Research Fellow in Medicine (appointment expired September 30, 1963).

CHARLES H. WEINGARTEN, M.D., Research Fellow in Medicine.

JOHN RICHARD WILLIAMSON, M.D., Research Fellow in Medicine (appointment expired August 31, 1963).

JOSEPH R. WILLIAMSON, M.D., Research Fellow in Medicine (appointment expired August 31, 1963).

KENNETH A. WOEBER, M.B., CH.B., Research Fellow in Medicine.

MARTIN J. WOHL, M.D., Research Fellow in Medicine.

JOHN F. WOODS, M.B., CH.B., Research Fellow in Medicine.

NICHOLAS A. YANKOPOULOS, M.D., Research Fellow in Medicine.

ELIAS ZISMAN, M.D., Research Fellow in Medicine.

KLAUS A. ZUPPINGER, M.D., Research Fellow in Medicine.

STAFFORD I. COHEN, M.D., Teaching Fellow in Medicine.

HOWARD B. CORNING, M.D., Teaching Fellow in Medicine.

MICHAEL A. GOLDSTEIN, M.D., Teaching Fellow in Medicine.

JOHN W. HARTHORNE, M.D., Teaching Fellow in Medicine.

LORE G. HOPFF, M.D., Teaching Fellow in Medicine (resigned September 30, 1963).

JAMES C. JORDAN, M.D., Teaching Fellow in Medicine.

GLENN Y. LEE, M.D., Teaching Fellow in Medicine.

MURRAY L. LEVIN, M.D., Teaching Fellow in Medicine.

JOSEPH PINES, M.D., Teaching Fellow in Medicine.

DAVID SHANDER, M.D., Teaching Fellow in Medicine.

HIBBARD E. WILLIAMS, M.D., Teaching Fellow in Medicine.

DONALD N. WYSHAM, M.D., Teaching Fellow in Medicine.

ROBERT DRUYAN, M.D., Louis W. Gilbert Fellow in Medicine.

Affiliated:

NEIL L. CRONE, M.D., Professor of Business Administration, and Director of the Business School Health Service.

DANA L. FARNSWORTH, M.D., Henry K. Oliver Professor of Hygiene, and Director of University Health Services.

MEDICINE

HERMAN M. KALCKAR, M.D., PH.D., Professor of Biological Chemistry at the Massachusetts General Hospital.

LEWIS L. ENGEL, PH.D., Associate Professor of Biological Chemistry, and Permanent Faculty Fellow of the American Cancer Society.

ROGER W. JEANLOZ, PH.D., Associate Professor of Biological Chemistry at the Massachusetts General Hospital.

EDWARD H. KASS, PH.D., M.D., Associate Professor of Bacteriology and Immunology.

JESSE F. SCOTT, M.D., Associate Professor of Oncologic Medicine.

EDGAR B. TAFT, M.D., Associate Clinical Professor of Pathology.

SIDNEY LESKOWITZ, PH.D., Assistant Professor of Bacteriology and Immunology at the Massachusetts General Hospital.

SIDNEY V. RIEDER, PH.D., Assistant Professor of Biological Chemistry at the Massachusetts General Hospital.

BENEDICT F. MASSELL, M.D., Lecturer on Pediatrics.

STANLEY J. ADELSTEIN, M.D., Philip H. Cook Fellow in Radiology, and Associate in Anatomy.

W. RICHARD BURACK, M.D., Associate in Pharmacology.

DONALD G. COMB, M.D., Associate in Biological Chemistry at the Massachusetts General Hospital.

WILLIAM J. REDDY, D.Sc., Associate in Biological Chemistry at the Peter Bent Brigham Hospital.

ANNETTE M. C. RAPIN, PH.D., Research Associate in Biological Chemistry.

Required Courses

The time given to the Department of Medicine begins for the entire class in the second half of the second year and continues thereafter so that each student spends about a third of his third year and more than a quarter of his fourth year in the study of medicine, including the medical specialties in the Departments of Neurology, Psychiatry, and Dermatology. The instruction given by the Department of Medicine is by means of lectures, amphitheatre clinics, laboratory exercises and practical work in out-patient departments and wards. Throughout, an effort is made to correlate the clinical aspects of patients with fundamental biologic principles and to establish in

HARVARD MEDICAL SCHOOL

the student's mind the importance of care and precision in diagnostic and therapeutic methods as best applied to fellow human beings living in a complex industrial society.

MEDICINE A. *Second Year.* — During the second half of the second year, the Department of Medicine in cooperation with the Departments of Pathology, Pharmacology, Surgery and others participates in the teaching of pathologic physiology. This course provides an integrated approach to understanding the basic principles of disease and includes intensive instruction in laboratory methods. Accompanying the instruction in pathologic physiology, a course is given in the study of the patient by history taking and physical examination. For this instruction, the students are divided into small groups and assigned to the four general hospitals.

MEDICINE B. *Third Year.* — Throughout the third year the subjects of internal medicine are covered by clinics or lectures for the whole class, which are given at the various hospitals or at the Harvard Medical School. For their practical instruction the students are divided into small groups and work in the medical wards or out-patient departments of the four general hospitals connected with the Medical School. On Monday and Wednesday afternoons the third of the class assigned to Medicine attends amphitheatre clinics, and X-ray conferences in rotation at the various hospitals or does assigned reading or clinical work. One week of the course is spent at the Middlesex County Sanatorium for special instruction in tuberculosis and other chest diseases.

MEDICINE C. *Fourth Year.* — In this year for two or three months the students serve mainly as clinical clerks in the medical wards of a general hospital. Part of their time, however, is devoted to acting as assistants in the medical clinic of the out-patient department. Especial emphasis is placed upon the care of the patient as an individual with respect to diagnosis and treatment. With individual variations in the different hospitals, conferences are held for the informal discussion of clinical, pathological, immunological, radiological, social or dietetic problems of selected cases.

Facilities for Instruction

The instruction is given at the Medical School, the Beth Israel Hospital, the Boston City Hospital, the Massachusetts General Hos-

MEDICINE

pital and the Peter Bent Brigham Hospital, as well as in several other hospitals devoted to special purposes. In these hospitals abundant and varied clinical material is available for the conduct of numerous exercises.

SECOND YEAR

HOURS

Pathologic physiology, including lectures and laboratory exercises. Dr. FREIMAN (Department of Pathology), Chairman, and Drs. ISSELBACHER, JANDL, and other members of the Department of Medicine together with members of the Departments of Pathology, Pharmacology, Surgery, Obstetrics and Gynecology, Pediatrics, Neurology and Psychiatry, Radiology, and Tropical Public Health. 538

Introductory medicine, including lectures and clinical experience. Dr. CHAPMAN (Chairman) and coordinators at the participating hospitals: Dr. WINER at the B.I.H.; Dr. JANDL at the B.C.H.; Dr. FEDERMAN at the M.G.H.; and Dr. FRIEND at the P.B.B.H.

Together, these two courses occupy eight half-days per week during the second semester.

THIRD YEAR

Lectures, recitations, and clinics on selected topics in internal medicine. Drs. BAUER, FINLAND, HIATT, THORN, and ASSOCIATES. Throughout the year. 46

Exercises in sections are held in the wards and out-patient departments at the general hospitals connected with the Medical School. The coordinator of this instruction is Dr. DAVIDSON. Directly in charge at the B.I.H. is Dr. LINENTHAL; at the B.C.H., Dr. ABELMANN; at the M.G.H., Dr. FOSTER; and at the P.B.B.H., Dr. MERRILL. Each section has thirty-two exercises of three hours each and twenty-one exercises of two hours each. 165

FOURTH YEAR

Clinical Clerkships at M.G.H. (Medicine C₁, Dr. BAUER and ASSOCIATES); B.C.H. (Medicine C₂, Drs. FINLAND, DAVIDSON, and ASSOCIATES); P.B.B.H. (Medicine C₃, Dr. THORN and

HARVARD MEDICAL SCHOOL

ASSOCIATES); B.I.H. (Medicine C4, Drs. HIATT, ALEXANDER, FREEDBERG, and ASSOCIATES).

Elective and Voluntary Courses

In addition to the required courses for fourth year students, the Department offers several opportunities for specially qualified students to take advanced elective courses, and arrangements must be made in advance with the head of the hospital department. Qualified students in their second or third years in free afternoons or in their fourth year during additional months may attend voluntary courses or carry on research problems in internal medicine by arrangements with individual instructors approved by the head of the hospital department.

Fourth Year Elective Courses

5. Advanced Medicine. Drs. BAUER, BECK, BIRD, BLAND, ISSELBACHER, LEAF, SMITH, STANBURY, WATKINS, and ASSOCIATES. M.G.H.
6. Advanced Medicine. Drs. FINLAND, BADGER, BIGELOW, CASTLE, DAVIDSON, EARLEY, ELLIS, FREINKEL, HURWITZ, INGBAR, JANDL, KASS, and ASSOCIATES. BC.H.
7. Advanced Medicine. Drs. THORN, DEXTER, GARDNER, GORLIN, GRAY, LEVINE, MERRILL, TYLER, VALLEE, WACKER, WELLS, and ASSOCIATES. P.B.B.H.
8. Advanced Medicine. Drs. HIATT, ALEXANDER, FREEDBERG, KURLAND, TROEN, WESSLER, ZOLL, and ASSOCIATES, B.I.H.
9. Advanced Medicine. Drs. WARTHIN, LITTMANN, and ASSOCIATES. W.R.V.A.H.
10. Advanced Medicine. Dr. CHALMERS and ASSOCIATES. L.S.H.
11. Diabetes. Drs. MARBLE, CAHILL, and ASSOCIATES. N.E.D.H.
12. Neoplastic Disease. Drs. ZAMECNIK, CASTLEMAN, ROBBINS, RUSSELL, G. S. RICHARDSON, and ASSOCIATES. M.G.H.
13. Physical Medicine and Rehabilitation. Dr. WATKINS. M.G.H.
14. Diseases of the Lungs. Dr. BADGER and ASSOCIATES. M.G.H., B.C.H., P.B.B.H., and C.H.M.C. Will not be offered in 1963-64.
15. Comprehensive Medical Care. Drs. FARNSWORTH, PROUT, and ASSOCIATES. University Health Services of Harvard University and Radcliffe College.

MEDICINE

Voluntary Courses

31. Clinics on Digestive Diseases. B.I.H. Drs. BANKS, ZETZEL, and ASSOCIATES. Will not be offered in 1963-64.
37. Diagnosis and Treatment of Heart Disease. B.I.H. Drs. RISEMAN, ALTSCHULE, and SAGALL. Tuesdays, 2:00-4:00 p.m., February and March. Open to third year students.
38. Diagnosis and Treatment of Diabetes Mellitus. B.I.H. Drs. BEASER, SINGER, and STEARNS. Tuesdays and Thursdays, 2:00-3:30 p.m., October. Open to third year students.
39. Electrocardiography. P.B.B.H., Dr. H. D. LEVINE. Will not be offered in 1963-64.
43. Physiological Basis and Treatment of Diabetes Mellitus. N.E.D.H. Drs. MARBLE, CAHILL, and ASSOCIATES. Tuesdays and Thursdays, 2:00-3:30 p.m., April. Open to second, third, and fourth year students.
44. Seminars on the Biology and Biochemistry of Disease. M.G.H. Drs. J. GROSS, R. B. COHEN, K. J. ISSELBACHER, M. J. GLIMCHER, and other staff members and outside speakers. Tentative time will be Tuesdays in February and March. Two hour seminar for eight weeks. Open to second, third, and fourth year students. For further information contact Dr. GROSS.
45. Endocrinology. B.I.H. Drs. D. HELLMAN, HIATT, and TROEN. Will not be offered in 1963-64.
46. Family Medicine. See Pediatrics 31.

HARVARD MEDICAL SCHOOL

DEPARTMENTS OF NEUROLOGY AND PSYCHIATRY

The Departments of Neurology and Psychiatry are comprised of three academic Departments of Neurology — at the Massachusetts General, The Children's and the Boston City Hospitals — and two academic Departments of Psychiatry — at the Massachusetts Mental Health Center and the Massachusetts General Hospital. The Department of Psychiatry at the Massachusetts Mental Health Center includes the teaching units at The Children's, the Peter Bent Brigham, the Beth Israel and the Boston City Hospitals. The Department of Psychiatry at the Massachusetts General Hospital includes the teaching unit at the McLean Hospital.

RAYMOND D. ADAMS, M.D., A.M. (hon.), Bullard Professor of Neuropathology, and Head of the Department of Neurology at the Massachusetts General Hospital.

CHARLES F. BARLOW, M.D., A.M. (hon.), Bronson Crothers Professor of Neurology and Head of the Department at The Children's Hospital.

DEREK E. DENNY-BROWN, DR. PHIL., M.D., A.M. (hon.), James Jackson Putnam Professor of Neurology, Head of the Department at the Boston City Hospital, and Chairman of the Executive Committee of the Departments of Neurology and Psychiatry.

JACK R. EWALT, M.D., A.M. (hon.), Bullard Professor of Psychiatry, and Head of the Department at the Massachusetts Mental Health Center.

ERICH LINDEMANN, PH.D., M.D., A.M. (hon.), Professor of Psychiatry, and Head of the Department at the Massachusetts General Hospital.

GRETE L. BIBRING, M.D., Clinical Professor of Psychiatry.

PETER B. DEWS, M.B., CH.B., PH.D., A.M. (hon.), Stanley Cobb Professor of Psychiatry and Psychobiology.

GEORGE E. GARDNER, PH.D., M.D., Clinical Professor of Psychiatry.

IVES HENDRICK, M.D., Clinical Professor of Psychiatry.

NEUROLOGY AND PSYCHIATRY

ALFRED POPE, M.D., Professor of Neuropathology at the McLean Hospital (from January 1, 1964).

ELVIN V. SEMRAD, M.D., Clinical Professor of Psychiatry.

HENRY M. FOX, M.D., Associate Clinical Professor of Psychiatry.

ALFRED POPE, M.D., Associate Professor of Neuropathology at the McLean Hospital (through December 31, 1963).

JAMES D. ROBERTSON, M.D., Associate Professor of Neuropathology at the McLean Hospital (from January 1, 1964).

GREGORY ROCHLIN, M.D., Associate Clinical Professor of Psychiatry.

ROBERT S. SCHWAB, M.D., Associate Clinical Professor of Neurology.

PHILIP SOLOMON, M.D., Associate Clinical Professor of Psychiatry.

JOHN P. SPIEGEL, M.D., Associate Clinical Professor of Psychiatry.

ALFRED H. STANTON, M.D., A.M. (hon.), Associate Professor of Psychiatry at the McLean Hospital.

HENRY H. BREWSTER, M.D., Assistant Clinical Professor of Psychiatry.

PHILIP R. DODGE, M.D., Assistant Professor of Neurology at the Massachusetts General Hospital.

THOMAS F. DWYER, M.D., Assistant Clinical Professor of Psychiatry.

FRANK R. ERVIN, M.D., Assistant Professor of Psychiatry at the Massachusetts General Hospital.

CHARLES M. FISHER, M.D., Assistant Clinical Professor of Neurology.

DANIEL H. FUNKENSTEIN, M.D., Assistant Professor of Psychiatry.

SANFORD R. GIFFORD, JR., M.D., Assistant Clinical Professor of Psychiatry.

LESTON L. HAVENS, M.D., Assistant Professor of Psychiatry.

DANIEL J. LEVINSON, PH.D., Assistant Professor of Psychology in the Department of Psychiatry.

JOHN C. NEMIAH, M.D., Assistant Professor of Psychiatry and Tutor in Psychiatry.

EDWARD P. RICHARDSON, JR., M.D., Assistant Professor of Neuropathology at the Massachusetts General Hospital.

HARVARD MEDICAL SCHOOL

JAMES D. ROBERTSON, M.D., Assistant Professor of Neuropathology at the McLean Hospital (through December 31, 1963).

MURRAY SIDMAN, PH.D., Assistant Professor of Psychology in the Department of Neurology at the Massachusetts General Hospital.

RICHARD L. SIDMAN, M.D., Assistant Professor of Neuropathology.

SAMUEL SILVERMAN, M.D., Assistant Clinical Professor of Psychiatry.

GEORGE A. TALLAND, PH.D., Assistant Professor of Psychology in the Department of Psychiatry.

WILLIAM H. TIMBERLAKE, M.D., Assistant Clinical Professor of Neurology.

H. RICHARD TYLER, M.D., Assistant Professor of Neurology (from January 1, 1964).

AVERY D. WEISMAN, M.D., Assistant Clinical Professor of Psychiatry.

ELIZABETH R. ZETZEL, M.D., Assistant Clinical Professor of Psychiatry.

FRANCIS J. BRACELAND, M.D., Lecturer on Psychiatry.

ERIK H. ERIKSON, A.M. (hon.), Lecturer on Psychiatry.

HAROLD S. ALBERT, M.D., C.M., Clinical Associate in Psychiatry.

NORMAN W. BELL, PH.D., Associate in Sociology in the Department of Psychiatry at the McLean Hospital.

SAMUEL BOJAR, M.D., Clinical Associate in Psychiatry.

MORRIS E. CHAFETZ, M.D., Clinical Associate in Psychiatry.

EDWIN M. COLE, M.D., Clinical Associate in Neurology.

GAYLORD P. COON, M.D., Clinical Associate in Psychiatry.

EDWARD M. DANIELS, M.D., Clinical Associate in Psychiatry.

FRANK C. D'ELSEAUX, M.D., Clinical Associate in Psychiatry.

PIERRE M. DREYFUS, M.D., Associate in Neurology at the Massachusetts General Hospital.

STANLEY H. ELDRED, M.D., Associate in Psychiatry at the McLean Hospital.

SAMUEL H. EPSTEIN, M.D., Clinical Associate in Neurology.

NEUROLOGY AND PSYCHIATRY

MARC A. FRIED, PH.D., Associate in Psychology in the Department of Psychiatry.

LESTER L. HASENBUSH, M.D., Clinical Associate in Psychiatry.

PAUL M. HOWARD, M.D., Clinical Associate in Psychiatry.

RALPH J. KAHANA, M.D., Clinical Associate in Psychiatry.

MERTON J. KAHNE, M.D., Clinical Associate in Psychiatry.

STANLEY S. KANTER, M.D., Clinical Associate in Psychiatry.

GERALD L. KLERMAN, M.D., Clinical Associate in Psychiatry.

ERIC H. LENNEBERG, PH.D., Associate in Psychology in the Department of Psychiatry at The Children's Hospital.

SIDNEY LEVIN, M.D., Clinical Associate in Psychiatry (from January 1, 1964).

OGDEN R. LINDSLEY, PH.D., Associate in Psychology in the Department of Psychiatry.

SIMEON LOCKE, M.D., Associate in Neurology.

CESARE T. LOMBROSO, M.D., Clinical Associate in Neurology.

ALFRED O. LUDWIG, M.D., Clinical Associate in Psychiatry.

JOHN M. MACKENZIE, M.D., Clinical Associate in Psychiatry (from October 16, 1963).

ELIZABETH S. MAKKAY, M.D., Associate in Psychiatry at The Children's Hospital.

ROBERT H. MCCARTER, M.D., Clinical Associate in Psychiatry.

JACK H. MENDELSON, M.D., Associate in Psychiatry at the Massachusetts General Hospital.

DORIS MENZER-BENARON, M.D., Clinical Associate in Psychiatry.

JOSEPH J. MICHAELS, M.D., Clinical Associate in Psychiatry.

ELLIOT G. MISHLER, PH.D., Clinical Associate in Psychology in the Department of Psychiatry.

WILLIAM F. MURPHY, PH.B., M.D., Clinical Associate in Psychiatry.

CECIL MUSHATT, M.D., Clinical Associate in Psychiatry.

DAVID J. MYERSON, M.D., Clinical Associate in Psychiatry.

MARTIN T. ORNE, M.D., Associate in Psychiatry.

GARDNER C. QUARTON, M.D., Associate in Psychiatry at the Massachusetts General Hospital (on leave September 1, 1963 through June 30, 1964).

HARVARD MEDICAL SCHOOL

- BENJAMIN C. RIGGS, M.D., Clinical Associate in Psychiatry.
FLAVIU C. A. ROMANUL, M.D., Associate in Neurology.
JUDY F. ROSENBLITH, PH.D., Associate in Psychology in the Department of Psychiatry at the Massachusetts General Hospital.
DAVID SHAPIRO, PH.D., Associate in Psychology in the Department of Psychiatry (from September 1, 1963).
PETER E. SIFNEOS, M.D., Associate in Psychiatry at the Massachusetts General Hospital.
LAURENCE D. TREVETT, M.D., Clinical Associate in Psychiatry.
H. RICHARD TYLER, M.D., Associate in Neurology (through December 31, 1963).
ARTHUR F. VALENSTEIN, M.D., Clinical Associate in Psychiatry.
HENRY DE F. WEBSTER, M.D., Associate in Neurology at the Massachusetts General Hospital.
HENRY WERMER, M.D., Clinical Associate in Psychiatry.
DONALD WEXLER, M.D., Clinical Associate in Psychiatry.
PÈTER H. WOLFF, M.D., Associate in Psychiatry at The Children's Hospital.
NORMAN E. ZINBERG, M.D., Clinical Associate in Psychiatry.
LOUIS S. CHASE, M.D., Lecturer on Psychiatry.
MILTON GREENBLATT, M.D., Lecturer on Psychiatry.
EVEOLEEN N. REXFORD, M.D., Lecturer on Psychiatry.
JOHN S. BARLOW, M.D., Research Associate in Neurology.
HOWARD T. BLANE, PH.D., Research Associate in Psychology in the Department of Psychiatry.
ARNE BRUN, M.D., Research Associate in Neuropathology (appointment expired August 31, 1963).
AYDIN CANKARDAS-WYSOCKI, PH.D., Research Associate in Psychology in the Department of Psychiatry.
ROSE L. COSER, PH.D., Research Associate in Sociology in the Department of Psychiatry.
GERALD E. CUBELLI, M.S., Research Associate in Psychiatry.
JOHN M. VON FELSINGER, PH.D., Research Associate in Psychology in the Department of Psychiatry.

NEUROLOGY AND PSYCHIATRY

MIRIAM F. FIEDLER, PH.D., Research Associate in Psychology in the Department of Psychiatry.

GEORGE GROSSER, PH.D., Research Associate in Psychology in the Department of Psychiatry.

ROBERT H. HARRISON, PH.D., Research Associate in Psychology in the Department of Psychiatry.

HELEN H. HESS, M.D., Research Associate in Neuropathology.

DOROTHY S. HUNTINGTON, PH.D., Research Associate in Psychology in the Department of Psychiatry.

ROBERT L. JAMES, PH.D., Research Associate in Psychology in the Department of Psychiatry.

ERIC R. KANDEL, M.D., Research Associate in Psychiatry (from November 15, 1963).

BRUCE W. KONIGSMARK, M.D., Research Associate in Neuropathology.

PHILIP E. KUBZANSKY, PH.D., Research Associate in Psychology in the Department of Psychiatry.

CLARA W. MAYO, PH.D., Research Associate in Psychology in the Department of Psychiatry (appointment terminated December 31, 1963).

NANCY K. MELLO, PH.D., Research Associate in Psychology in the Department of Psychiatry.

ROBERT C. MISCH, PH.D., Research Associate in Psychology in the Department of Psychiatry (from September 1, 1963).

BENJAMIN J. MURAWSKI, PH.D., Research Associate in Psychology in the Department of Psychiatry.

HILDA D. PERLITSH, PH.D., Research Associate in Psychology in the Department of Psychiatry (from September 1, 1963).

ASENATH PETRIE, PH.D., Research Associate in Psychology in the Department of Psychiatry.

JOSEPH C. RHEINGOLD, M.D., PH.D., Research Associate in Psychiatry.

MARGARET R. RICH, PH.D., Research Associate in Psychology in the Department of Psychiatry.

GEORGE C. ROSENWALD, PH.D., Research Associate in Psychology in the Department of Psychiatry.

HARVARD MEDICAL SCHOOL

- ASCANIO M. ROSSI, PH.D., Research Associate in Psychology in the Department of Psychiatry.
- EDWARD J. SACHAR, M.D., Research Associate in Psychiatry.
- JOSEPH M. SEGARRA, M.D., Research Associate in Neurology.
- DAVID SHAPIRO, PH.D., Research Associate in Psychology in the Department of Psychiatry (through August 31, 1963).
- LEWIS J. SHERMAN, PH.D., Research Associate in Psychology in the Department of Psychiatry.
- RONALD E. SHOR, PH.D., Research Associate in Psychology in the Department of Psychiatry.
- KATHERINE SPENCER, PH.D., Research Associate in Social Anthropology in the Department of Psychiatry.
- IRENE PIERCE STIVER, PH.D., Research Associate in Psychology in the Department of Psychiatry.
- LAWRENCE T. STODDARD, PH.D., Research Associate in Psychology in the Department of Neurology.
- ABRAHAM TOWBIN, M.D., Research Associate in Neuropathology.
- NANCY E. WAXLER, PH.D., Research Associate in Psychology in the Department of Psychiatry.
- HENRY WECHSLER, PH.D., Research Associate in Psychology in the Department of Psychiatry.
- JUSTIN L. WEISS, PH.D., Research Associate in Psychology in the Department of Psychiatry.
- JASON A. ARONSON, M.D., Instructor in Psychiatry.
- MYER ASEKOFF, M.D., Instructor in Psychiatry.
- HERBERT BARRY, JR., PH.D., M.D., Instructor in Psychiatry.
- TULLY BENARON, M.D., Instructor in Psychiatry.
- CLEMENS E. BENDA, M.D., Instructor in Psychiatry.
- MARTIN A. BEREZIN, M.D., Instructor in Psychiatry.
- NORMAN R. BERNSTEIN, M.D., Instructor in Psychiatry.
- WILLIAM A. BINSTOCK, M.D., Instructor in Psychiatry.
- JOHN R. BLITZER, M.D., Instructor in Psychiatry.
- FRANCES J. BONNER, M.D., Instructor in Psychiatry.
- ROBERT L. BRAGG, M.D., M.P.H., Instructor in Psychiatry.
- BENJAMIN B. BRUSSEL, M.D., Instructor in Psychiatry.
- MARGARET BULLOWA, M.D., Instructor in Psychiatry.

NEUROLOGY AND PSYCHIATRY

- ARTHUR J. CAIN, M.D., Instructor in Psychiatry.
JACOB CHRIST, M.D., Instructor in Psychiatry.
JOHN G. CLARK, JR., M.D., Instructor in Psychiatry.
MANDEL E. COHEN, M.D., Instructor in Neurology.
RAQUEL E. COHEN, M.P.H., M.D., Instructor in Psychiatry.
RICHARD E. CUTLER, M.D., Instructor in Psychiatry.
GERALD E. DAVIDSON, M.D., Instructor in Psychiatry.
DANIEL C. DAWES, M.D., Instructor in Psychiatry.
MAX DAY, M.D., Instructor in Psychiatry.
FRANCIS L. A. DE MARNEFFE, M.B., B.S., Instructor in Psychiatry.
FREDERICK J. DUHL, M.D., Instructor in Psychiatry.
ALBERT C. ENGLAND, JR., M.D., Instructor in Neurology.
ROBERT G. FELDMAN, M.D., Instructor in Neurology.
ABRAHAM D. FINEMAN, M.D., Instructor in Psychiatry.
ABRAHAM L. FINESINGER, PH.D., M.D., Instructor in Psychiatry.
THOMAS FRANK, M.D., Instructor in Psychiatry.
DONALD S. GAIR, M.D., Instructor in Psychiatry.
RICHARD GALDSTON, M.D., Instructor in Psychiatry.
PHILLIP H. GATES, M.D., Instructor in Psychiatry.
BENJAMIN F. GILL, M.D., Instructor in Psychiatry.
FLOYD H. GILLES, M.D., Instructor in Neurology.
ERIK GLUD, M.D., Instructor in Psychiatry.
MAX GOLDMAN, M.D., Instructor in Neurology.
GERTRUDE R. GREENBLATT, M.D., Instructor in Psychiatry.
LESTER GRINSPOON, M.D., Instructor in Psychiatry.
HENRY U. GRUNEBaum, M.D., Instructor in Psychiatry.
THOMAS P. HACKETT, M.D., Instructor in Psychiatry.
JAMES A. HAYCOX, M.D., Instructor in Psychiatry.
HOWARD T. HERMANN, M.D., Instructor in Psychiatry (from September 1, 1963).
HELEN M. HERZAN, M.D., Instructor in Psychiatry.
RICHMOND HOLDER, M.D., Instructor in Psychiatry.
ROBERT W. HYDE, M.D., Instructor in Psychiatry.
PETER B. JENNEY, M.D., Instructor in Psychiatry.
CHARLES A. KANE, M.D., Instructor in Neurology.
SAMUEL KAPLAN, M.D., Instructor in Psychiatry.

HARVARD MEDICAL SCHOOL

EDMUND N. KUDARAUSKAS, M.D., Instructor in Psychiatry.

JOHN H. LAMONT, M.D., Instructor in Psychiatry.

SIDNEY LEVIN, M.D., Instructor in Psychiatry (through December 31, 1963).

BERNARD LEVINE, PH.D., Instructor in Psychology in the Department of Psychiatry.

MARIA LORENZ, M.D., Instructor in Psychiatry.

JOHN E. MACK, M.D., Instructor in Psychiatry (from January 1, 1964).

WALTER MANN, PH.D., M.D., Instructor in Psychiatry.

RICHARD F. MAYER, M.D., Instructor in Neurology.

WILLIAM F. McLAUGHLIN, M.D., C.M., Instructor in Psychiatry.

EDWARD MESSNER, M.D., Instructor in Psychiatry.

HALIM MITRY, M.B., CH.B., Instructor in Psychiatry.

ARNOLD H. MODELL, M.D., Instructor in Psychiatry.

SAMUEL L. MOGUL, M.D., Instructor in Psychiatry.

THOMAS A. MORRIS, JR., M.D., Instructor in Psychiatry.

HUGO W. MOSER, M.D., Instructor in Neurology.

EGBERT H. MUELLER, M.D., Instructor in Psychiatry.

JAMES J. MULLER, PH.D., Instructor in Psychology in the Department of Psychiatry.

MALKAH T. NOTMAN, M.D., Instructor in Psychiatry.

LEONARD D. OSLER, M.B., CH.B., Instructor in Neurology.

DONALD H. OSTERBERG, M.D., Instructor in Neurology.

ANN PARSONS, PH.D., Instructor in Social Anthropology in the Department of Psychiatry.

VERNON D. PATCH, M.D., Instructor in Psychiatry.

NORMAN L. PAUL, M.D., Instructor in Psychiatry.

EDMUND C. PAYNE, JR., M.D., Instructor in Psychiatry.

RICHARD R. PEEBLES, PH.D., Instructor in Psychology in the Department of Psychiatry.

VINCENT P. PERLO, M.D., Instructor in Neurology.

ERNEST H. PICARD, M.D., Instructor in Neurology.

MAXWELL G. POTTER, M.D., Instructor in Psychiatry.

DAVID E. REISER, M.D., Instructor in Psychiatry.

NEUROLOGY AND PSYCHIATRY

JACQUELINE L. ROSEN, PH.D., Instructor in Psychology in the Department of Psychiatry.

DONALD H. RUSSELL, M.D., Instructor in Psychiatry.

JOSEPH C. SABBATH, M.D., C.M., Instructor in Psychiatry.

ADELE E. SCHARL, M.D., Instructor in Psychiatry.

ROBERT D. SCHNITZER, PH.D., Instructor in Psychology in the Department of Psychiatry.

MARY L. L. SCHOLL, M.D., Instructor in Neurology.

LIONEL A. SCHWARTZ, M.D., Instructor in Psychiatry.

BERTRAM SELVERSTONE, M.D., Instructor in Neuropathology.

BENJAMIN SHAMBAUGH, M.D., Instructor in Psychiatry.

LEON N. SHAPIRO, M.D., Instructor in Psychiatry.

JUDITH G. SINGER, PH.D., Instructor in Psychology in the Department of Psychiatry.

BENSON R. SNYDER, M.D., Instructor in Psychiatry.

EDWARD L. SPATZ, M.D., Instructor in Neurology.

HAROLD D. STALVEY, M.D., Instructor in Psychiatry.

MALVINA STOCK, M.D., Instructor in Psychiatry.

ALAN A. STONE, M.D., Instructor in Psychiatry.

JOHN B. STURROCK, M.B., B.S., Instructor in Psychiatry.

JOHN F. SULLIVAN, M.D., Instructor in Neurology.

HELEN H. TARTAKOFF, M.D., Instructor in Psychiatry.

KAREL VAN S. TOLL, M.D., Instructor in Neurology.

SUZANNE T. VAN AMERONGEN, M.D., Instructor in Psychiatry.

MAURICE VANDERPOL, M.D., Instructor in Psychiatry.

STEPHEN L. WASHBURN, M.D., Instructor in Psychiatry.

PAUL L. WATSON, M.D., Instructor in Psychiatry.

JEROME L. WEINBERGER, M.D., Instructor in Psychiatry.

LEONARD WEINER, M.D., Instructor in Psychiatry (from December 1, 1963).

LIONELLE D. WELLS, M.D., Instructor in Psychiatry.

HOWARD E. WULSIN, M.D., Instructor in Psychiatry.

WILLIAM C. ACKERLY, M.D., Assistant in Psychiatry.

GERALD ADLER, M.D., Assistant in Psychiatry.

MORRIS H. ADLER, M.D., Assistant in Psychiatry.

BARBARA L. AESCHLIMAN, M.D., Assistant in Psychiatry.

HARVARD MEDICAL SCHOOL

GEORGE L. ALEXANDER, JR., M.D., Assistant in Psychiatry.
HENRY G. ALTMAN, M.D., Assistant in Psychiatry.
A. SCOTT ANDERSON, M.D., Assistant in Psychiatry.
WILLIAM S. APPLETON, M.D., Assistant in Psychiatry.
JUDITH G. BALOGH, M.D., Assistant in Psychiatry.
RUTH B. BEUSCHER, M.D., Assistant in Psychiatry.
WILLIAM F. BEUSCHER, M.D., Assistant in Psychiatry.
GRAHAM B. BLAINE, JR., M.D., Assistant in Psychiatry.
LENORE A. BOLING, M.D., Assistant in Psychiatry.
JOSEPH H. BRENNER, M.B., CH.B., Assistant in Psychiatry.
ANNA C. BROWN, M.D., Assistant in Psychiatry.
DEXTER M. BULLARD, JR., M.D., Assistant in Psychiatry.
BERNARD L. BUSFIELD, JR., M.D., Assistant in Psychiatry.
LLOYD M. CAPLAN, M.D., Assistant in Psychiatry.
FRANKLIN CARTER, M.D., Assistant in Psychiatry.
GEORGE CHALPIN, M.D., Assistant in Psychiatry.
MIGNON C. CHASEN, M.D., Assistant in Psychiatry.
HERBERT S. CLINE, M.D., Assistant in Psychiatry.
JAY L. COLLINS, M.D., Assistant in Psychiatry.
JOHN C. COOLIDGE, M.D., Assistant in Psychiatry.
WILLIAM M. CROWELL, M.D., Assistant in Psychiatry.
HADASSAH S. DANIELS, M.D., Assistant in Psychiatry.
CHESTER C. D'AUTREMONT, M.D., Assistant in Psychiatry.
EDWIN M. DAVIDSON, M.D., Assistant in Psychiatry.
PAUL R. DINSMORE, M.D., Assistant in Psychiatry.
GERHART A. DUDA, M.D., Assistant in Psychiatry.
RALPH P. ENGLE, JR., M.D., Assistant in Psychiatry.
JOEL H. FEIGON, M.D., Assistant in Psychiatry.
ALBERT H. FEINGOLD, M.D., Assistant in Psychiatry.
ALICE M. FLEMING, M.D., Assistant in Psychiatry.
THOMAS C. FLEMING, M.D., Assistant in Neurology.
LEONARD J. FRIEDMAN, M.D., Assistant in Psychiatry.
MAX GELLER, M.D., Assistant in Psychiatry.
GEORGE E. GIFFORD, JR., M.D., Assistant in Psychiatry.
HERBERT J. GOLDINGS, M.D., Assistant in Psychiatry.
JACK GREEN, M.D., C.M., Assistant in Psychiatry.

NEUROLOGY AND PSYCHIATRY

- EMILE GRUNBERG, M.D., Assistant in Psychiatry.
WALLACE F. HALEY, JR., M.D., Assistant in Psychiatry.
DORR F. HALLENBECK, JR., M.D., Assistant in Psychiatry.
HERBERT I. HARRIS, M.D., Assistant in Psychiatry.
FRANCIS C. HERSEY, M.D., Assistant in Psychiatry.
CARLOS L. HUDSON, M.D., Assistant in Psychiatry.
PHILLIP L. ISENBERG, M.D., Assistant in Psychiatry.
PIERRE JOHANNET, M.D., Assistant in Psychiatry.
EDA M. KAHANA, M.D., Assistant in Psychiatry.
ERNEST KAHN, M.D., Assistant in Psychiatry.
MELVIN M. KAYCE, M.D., Assistant in Psychiatry.
ROBERT L. KELLEY, M.D., Assistant in Psychiatry.
WILLIAM KORNFELD, M.D., Assistant in Psychiatry.
PAUL S. KRAUS, M.D., Assistant in Psychiatry.
ARTHUR R. KRAVITZ, M.D., Assistant in Psychiatry.
MARVIN B. KRIMS, M.D., Assistant in Psychiatry.
ELIOT LANDSMAN, M.D., Assistant in Psychiatry.
HERBERT O. LEVINE, M.D., Assistant in Psychiatry.
ANNE G. LEVINGSTON, M.D., Assistant in Psychiatry.
DON R. LIPSITT, M.D., Assistant in Psychiatry.
JOHN E. MACK, M.D., Assistant in Psychiatry (through December 31, 1963).
ARTHUR W. McMAHON, M.D., Assistant in Psychiatry.
ELINOR MEISS, M.D., Assistant in Psychiatry.
EMANUEL MIREL, M.D., Assistant in Psychiatry.
BARBARA C. G. MUELLER, M.D., Assistant in Psychiatry.
HARRY S. OLIN, M.D., Assistant in Psychiatry.
SILVIO J. ONESTI, JR., M.D., C.M., Assistant in Psychiatry.
DONALD OTTENSTEIN, M.D., Assistant in Psychiatry.
JALNA A. PERRY, M.D., Assistant in Psychiatry.
ALAN PRAGER, M.D., Assistant in Psychiatry.
WALTER M. PRESNELL, M.D., Assistant in Psychiatry (resigned August 31, 1963).
DAVIDA H. REES, M.D., Assistant in Psychiatry.
PETER REICH, M.D., Assistant in Psychiatry.
JOHN F. REICHARD, M.D., Assistant in Psychiatry.

HARVARD MEDICAL SCHOOL

- PHELPS M. ROBINSON, M.D., Assistant in Psychiatry.
NANCY ROLLINS, M.D., Assistant in Psychiatry.
THEODORE SACK, M.D., Assistant in Psychiatry.
JOAE G. SELZER, M.D., Assistant in Psychiatry.
WILLIAM SHARPE, JR., M.D., Assistant in Psychiatry.
WILLIAM R. SHELTON, M.D., Assistant in Psychiatry.
MILES F. SHORE, M.D., Assistant in Psychiatry.
NATHAN T. SIDLEY, M.D., Assistant in Psychiatry.
RICHARD H. SMITH, M.D., Assistant in Psychiatry.
STEWART R. SMITH, M.D., Assistant in Psychiatry.
RUTH E. STAUFFER, M.D., Assistant in Neurology.
RICHARD A. STERNBACH, PH.D., Assistant in Psychology in the
Department of Psychiatry.
MYRON R. STOCKING, M.D., Assistant in Psychiatry.
WILLIAM E. STONE, M.D., Assistant in Psychiatry.
WILLIAM D. TEMBY, M.D., Assistant in Psychiatry.
JOHN VORENBERG, M.D., Assistant in Psychiatry.
HELEN D. WALLACH, M.D., Assistant in Psychiatry.
MARK M. WALTER, JR., M.D., M.P.H., Assistant in Psychiatry.
JOHN L. WEIL, M.D., Assistant in Psychiatry.
FREDERICK E. WHISKIN, M.D., Assistant in Psychiatry.
LEE H. WILLER, M.D., Assistant in Psychiatry.
RICHARD V. WILSON, M.D., Assistant in Psychiatry.
GERALD F. WINKLER, M.D., Assistant in Neurology.
ANNA K. WOLFF, M.D., Assistant in Psychiatry.
HAROLD M. WOLMAN, M.D., Assistant in Psychiatry.
EDWARD L. ZARSKY, M.D., Assistant in Psychiatry.
JOAN J. ZILBACH, M.D., Assistant in Psychiatry.
ROBERT F. ANDREWS, M.D., Research Fellow in Neuropathology
(appointment expired December 31, 1963).
OTTO APPENZELLER, M.B., B.S., Research Fellow in Neurology.
JOSEPH F. ARENA, M.D., Research Fellow in Neurology.
ARTHUR K. ASBURY, M.D., Research Fellow in Neuropathology.
KARL-ERIK ASTROM, M.D., PH.D., Research Fellow in Neuro-
pathology (from August 1, 1963).

NEUROLOGY AND PSYCHIATRY

JOHN R. BARINGER, M.D., Research Fellow in Neurology (from September 15, 1963).

WILLIAM J. BARNUM, JR., M.D., Research Fellow in Psychiatry.

KENNETH R. BERG, PH.D., Research Fellow in Psychology in the Department of Psychiatry (appointment expired September 30, 1963).

ALAN F. BLUM, PH.D., Research Fellow in Psychology in the Department of Psychiatry (from October 1, 1963).

STUART B. BROWN, M.D., Research Fellow in Neurology.

DOUGLAS BUCHANAN, M.D., Research Fellow in Psychiatry.

ROBERT E. BURKE, M.D., Research Fellow in Neurology.

RANDOLPH CATLIN, JR., M.D., Research Fellow in Psychiatry.

THOMAS N. CHASE, M.D., Research Fellow in Neurology.

JOHN N. CHESEBROUGH, M.D., C.M., Research Fellow in Neurology.

ROBERT CSERR, M.D., Research Fellow in Psychiatry.

DAVID M. DAWSON, M.D., Research Fellow in Neurology.

BENNETT M. DERBY, M.D., Research Fellow in Neuropathology.

LAURENT DESCARRIES, M.D., Research Fellow in Neurology.

DONALD G. DORENCAMP, M.D., Research Fellow in Psychiatry.

ROMAN W. EINHORN, M.D., Research Fellow in Neurology.

LARRY EMBREE, M.D., Research Fellow in Neurology.

DONALD J. FERN, M.D., Research Fellow in Psychiatry.

PETER B. FIELD, PH.D., Research Fellow in Psychology in the Department of Psychiatry.

JECHIEL M. FRIEDMAN, M.D., Research Fellow in Psychiatry (from September 1, 1963).

FRANCIS P. GALLAGHER, M.D., Research Fellow in Psychiatry.

SID GILMAN, M.D., Research Fellow in Neurology.

LAWRENCE A. GUSTAFSON, PH.D., Research Fellow in Psychology in the Department of Psychiatry.

FRANK HAENDEL, M.D., Research Fellow in Psychiatry.

DUANE Q. HAGEN, M.D., Research Fellow in Psychiatry.

ROBERT E. HAYES, 3RD, M.D., Research Fellow in Neuropathology.

ANN M. M. HIRSCHHORN, M.D., Research Fellow in Neurology.

HARVARD MEDICAL SCHOOL

EDWARD L. HOGAN, M.D., Research Fellow in Neurology.

GWENDOLYN R. HOGAN, M.D., Research Fellow in Neuropathology.

JOSHUA HOLLANDER, M.D., Research Fellow in Neuropathology.

MATHILDA S. HOLZMAN, PH.D., Research Fellow in Psychology in the Department of Psychiatry (appointment expired August 31, 1963).

CLAIRE M. HOSSENLOPP, M.D., Research Fellow in Psychiatry.

PETER R. HUTTENLOCHER, M.D., Research Fellow in Neuropathology.

GARY JACOBSON, M.D., Research Fellow in Psychiatry.

BYRON A. KAKULAS, M.B., B.S., Research Fellow in Neuropathology (from September 1, 1963).

THOMAS W. KELLY, M.D., Research Fellow in Neurology.

ROBERT KIM, M.D., Research Fellow in Neurology.

ALFRED J. R. KOUMANS, M.D., Research Fellow in Psychiatry.

RUTH LANDOLT, M.D., Research Fellow in Neuropathology (appointment expired December 31, 1963).

MIGUEL A. LEIBOVICH, M.D., Research Fellow in Psychiatry.

ALAN I. LEVENSON, M.D., Research Fellow in Psychiatry.

CARL LEVENTHAL, M.D., Research Fellow in Neurology.

WALTER S. LEVITSKY, M.D., Research Fellow in Neurology.

JOHN B. LIVINGSTONE, M.D., Research Fellow in Psychiatry.

RICHARD N. LOLLEY, PH.D., Research Fellow in Neuropathology.

JOHN T. MALTSBERGER, 3RD, M.D., Research Fellow in Psychiatry.

DONALD F. MANGER, M.D., Research Fellow in Neurology.

ALEJANDRO MANTEROLA, M.D., Research Fellow in Neuropathology (appointment expired August 31, 1963).

JAMES MARTIN, M.D., Research Fellow in Neuropathology.

CLIFFORD MAWDSLEY, M.B., CH.B., Research Fellow in Neurology (from September 1, 1963).

DONALD A. MCGEE, M.D., Research Fellow in Neuropathology.

MICHAEL T. MCGUIRE, M.D., Research Fellow in Psychiatry.

EDUARDO MIRABAL-FONT, M.D., Research Fellow in Neurology.

SANDRA L. MOGIL, M.D., Research Fellow in Psychiatry.

MURIEL E. MOLDAWER, M.D., Research Fellow in Psychiatry.

NEUROLOGY AND PSYCHIATRY

- DONALD J. MORRISON, M.D., Research Fellow in Psychiatry.
- PETER NATHAN, PH.D., Research Fellow in Psychology in the Department of Psychiatry.
- NANCY P. NICHOLS, M.D., Research Fellow in Psychiatry (appointment expired December 31, 1963).
- SHYAM S. PANT, M.B., B.S., Research Fellow in Neuropathology.
- MARTIN POLLOCK, M.D., Research Fellow in Neurology.
- ARTHUR L. PRENSKY, M.D., Research Fellow in Neurology.
- DONALD L. PRICE, M.D., Research Fellow in Neurology.
- JUDITH G. RONAT, M.D., Research Fellow in Psychiatry.
- LARRY ROSENBERG, PH.D., Research Fellow in Psychology in the Department of Psychiatry (from September 1, 1963).
- PETER B. ROSENBERGER, M.D., Research Fellow in Neurology.
- ROBERT A. ROSENTHAL, PH.D., Research Fellow in Psychology in the Department of Psychiatry (appointment expired August 31, 1963).
- NORMAN P. ROSMAN, M.D., C.M., Research Fellow in Neurology.
- CHRISTOPHER V. ROWLAND, JR., M.D., Research Fellow in Psychiatry.
- BYRON N. RUDOLPH, M.D., Research Fellow in Psychiatry (appointment terminated December 31, 1963).
- YOICHI SAITO, M.D., Research Fellow in Psychiatry.
- LAWRENCE C. SALVESEN, M.D., Research Fellow in Psychiatry.
- FREDERICK SAMAHA, M.D., Research Fellow in Neurology.
- SIRGAY SANGER, M.D., Research Fellow in Psychiatry.
- PAUL E. SAPIR, M.D., Research Fellow in Psychiatry.
- DANIEL S. SAX, M.D., Research Fellow in Neurology.
- DONALD J. SCHERL, M.D., Research Fellow in Psychiatry.
- ALVAN R. SCHWARTZ, M.D., Research Fellow in Neurology.
- RICHARD A. SCHWARTZ, M.D., Research Fellow in Psychiatry.
- ARTHUR TAUB, M.D., Research Fellow in Neurology (resigned October 31, 1963).
- DENNIS D. THOEN, M.D., Research Fellow in Neurology.
- THOMAS L. TRUNNELL, M.D., Research Fellow in Psychiatry.
- DAVID VAN BUSKIRK, M.D., Research Fellow in Psychiatry.

HARVARD MEDICAL SCHOOL

JOSEPH P. VAN DER MEULEN, M.D., Research Fellow in Neurology.

FREDERICK Q. VROOM, M.D., Research Fellow in Neurology.

PAUL WACHTER, M.D., Research Fellow in Psychiatry.

MICHAEL J. WALKER, M.D., Research Fellow in Psychiatry.

STEPHEN L. WANGER, M.D., Research Fellow in Neurology.

MERRILL K. WOLF, M.D., Research Fellow in Neuropathology.

CHARLES D. WOODY, M.D., Research Fellow in Neurology.

GILBERT F. YOUNG, M.D., Research Fellow in Neuropathology
(appointment expired December 31, 1963).

ROBERT R. YOUNG, M.D., Research Fellow in Neuropathology.

THOMAS ZION, M.D., Research Fellow in Neurology.

WALTER E. AFIELD, M.D., Teaching Fellow in Psychiatry.

JACQUELINE M. AMATI, M.D., Teaching Fellow in Psychiatry.

JOHN H. BACKMAN, M.D., Teaching Fellow in Psychiatry.

SAMUEL H. BARONDES, M.D., Teaching Fellow in Psychiatry.

JAMES E. BARRETT, JR., M.D., Teaching Fellow in Psychiatry.

KATHRYN S. BECK, M.D., Teaching Fellow in Psychiatry.

GUIDO BELSASSO-PRISTER, M.D., Teaching Fellow in Psychiatry.

MICHAEL BENNETT, M.D., Teaching Fellow in Psychiatry.

JANE M. BERMAN, M.D., Teaching Fellow in Psychiatry.

CARL L. BIRK, M.D., Teaching Fellow in Psychiatry (from September 1, 1963).

JOSEPH BLOOM, M.D., Teaching Fellow in Psychiatry (appointment terminated October 31, 1963).

PETER R. BREGGIN, M.D., Teaching Fellow in Psychiatry.

HARVEY M. BUDNER, M.D., Teaching Fellow in Psychiatry.

RICHARD D. BUDSON, M.D., Teaching Fellow in Psychiatry.

DAN H. BUIE, JR., M.D., Teaching Fellow in Psychiatry.

ROBERT M. CHALFIN, M.D., Teaching Fellow in Psychiatry.

RICHARD M. CHASIN, M.D., Teaching Fellow in Psychiatry.

GEORGE CLOUTIER, M.D., Teaching Fellow in Psychiatry (appointment expired August 31, 1963).

ROY M. COLEMAN, M.D., Teaching Fellow in Psychiatry.

MICHAEL L. CONNELL, M.D., Teaching Fellow in Psychiatry.

MARIANNE DIERKS, M.D., Teaching Fellow in Psychiatry.

NEUROLOGY AND PSYCHIATRY

- DAN A. DITMORE, M.D., Teaching Fellow in Psychiatry (appointment expired August 31, 1963).
- THEODORE DREIER, JR., M.D., Teaching Fellow in Psychiatry.
- MATTHEW P. DUMONT, M.D., Teaching Fellow in Psychiatry.
- FREDERICK M. EHRLICH, M.D., Teaching Fellow in Psychiatry.
- BYRON A. ELIASHOF, M.D., Teaching Fellow in Psychiatry.
- ROBERT W. FARKAS, M.D., Teaching Fellow in Psychiatry.
- HENRY FRIEDMAN, M.D., Teaching Fellow in Psychiatry.
- SAUL GLASNER, M.D., Teaching Fellow in Psychiatry.
- RICHARD B. GOULD, M.D., Teaching Fellow in Psychiatry.
- SIDNEY GREEN, M.D., Teaching Fellow in Psychiatry.
- STEFANIE K. GREENE, M.D., Teaching Fellow in Psychiatry (appointment terminated November 30, 1963).
- GRAEME HANSON, M.D., Teaching Fellow in Psychiatry.
- JOHN H. HART, M.D., Teaching Fellow in Psychiatry.
- GEORGE R. HENINGER, M.D., Teaching Fellow in Psychiatry.
- ALBERT E. HERMAN, M.D., Teaching Fellow in Psychiatry.
- AXEL HOFFER, M.D., Teaching Fellow in Psychiatry.
- JORDAN JOSEPH, M.D., Teaching Fellow in Neurology.
- ALEXANDRA M. KAIL, M.D., C.M., Teaching Fellow in Psychiatry.
- SHARON L. KAUFMAN, M.D., Teaching Fellow in Psychiatry.
- ERIC P. KINDWALL, M.D., Teaching Fellow in Psychiatry.
- SUSAN T. KLEEMAN, M.D., Teaching Fellow in Psychiatry.
- MIROSLAV M. KOVACEVICH, M.D., Teaching Fellow in Psychiatry.
- GABRIEL KOZ, M.B., CH.B., Teaching Fellow in Psychiatry.
- AARON LAZARE, M.D., Teaching Fellow in Psychiatry.
- CAVIN P. LEEMAN, M.D., Teaching Fellow in Psychiatry.
- BERNARD LEVEY, M.D., Teaching Fellow in Psychiatry.
- LEILA LIEBMAN, M.D., Teaching Fellow in Psychiatry (appointment expired August 31, 1963).
- LEE B. MACHT, M.D., Teaching Fellow in Psychiatry.
- ALEKSANDER MATHE, M.D., Teaching Fellow in Psychiatry (resigned September 30, 1963).
- ROGER E. MEYER, M.D., Teaching Fellow in Psychiatry.
- RICHARD G. MORRILL, M.D., Teaching Fellow in Psychiatry.
- LOREN MOSHER, M.D., Teaching Fellow in Psychiatry.

HARVARD MEDICAL SCHOOL

JAMES J. MULLEN, M.D., Teaching Fellow in Psychiatry (appointment expired August 31, 1963).

THEODORE NADELSON, M.D., Teaching Fellow in Psychiatry.

JULIAN J. NEWMAN, M.D., Teaching Fellow in Psychiatry (appointment expired August 31, 1963).

HENRY NUNBERG, LL.B., M.D., Teaching Fellow in Psychiatry.

ANITA PAINE, M.D., Teaching Fellow in Psychiatry.

CONSTANTINOS P. PANAYOTACOPOULOS, M.D., Teaching Fellow in Psychiatry.

EUGENE U. PIAZZA, M.D., Teaching Fellow in Psychiatry.

RICHARD O. POE, M.D., Teaching Fellow in Psychiatry.

WILLIAM J. POLK, M.D., Teaching Fellow in Psychiatry.

MICHAEL E. POLLATSEK, M.D., Teaching Fellow in Psychiatry.

ROBERT L. PYLES, M.D., Teaching Fellow in Psychiatry.

PETER B. F. RANDOLPH, M.D., Teaching Fellow in Psychiatry.

DAVID REISS, M.D., Teaching Fellow in Psychiatry.

DONALD L. RIFE, M.D., Teaching Fellow in Psychiatry.

STEPHEN I. RING, M.D., Teaching Fellow in Psychiatry.

MICHAEL D. ROBBINS, M.D., Teaching Fellow in Psychiatry.

KENNETH S. ROBSON, M.D., Teaching Fellow in Psychiatry.

EDWARD J. ROLDE, M.D., Teaching Fellow in Psychiatry (resigned September 30, 1963).

ROBERT M. ROSE, M.D., Teaching Fellow in Psychiatry.

RACHEL M. ROSENBERG, M.D., Teaching Fellow in Psychiatry.

SAUL H. ROSENTHAL, M.D., Teaching Fellow in Psychiatry.

RICHARD SENS, M.D., Teaching Fellow in Psychiatry.

CAROL C. SHANDER, M.D., Teaching Fellow in Psychiatry.

THEODORE C. SHEFTTEL, M.D., Teaching Fellow in Psychiatry.

HARVEY M. SHEIN, M.D., Teaching Fellow in Psychiatry.

JULIUS SILBERGER, JR., M.D., Teaching Fellow in Psychiatry.

JOHN J. SOLTYS, JR., M.D., Teaching Fellow in Psychiatry.

JOHN B. SPILLANE, M.D., Teaching Fellow in Psychiatry.

LAWRENCE A. STONE, M.D., Teaching Fellow in Psychiatry.

SUMNER STONE, M.D., Teaching Fellow in Psychiatry.

BERNARD A. STOTSKY, M.D., Teaching Fellow in Psychiatry.

LARRY H. STRASBURGER, M.D., Teaching Fellow in Psychiatry.

NEUROLOGY AND PSYCHIATRY

JOHN S. STRAUSS, M.D., Teaching Fellow in Psychiatry.
CECIL J. TODES, M.D., Teaching Fellow in Psychiatry.
RAFIQ WAZIRI, M.D., Teaching Fellow in Psychiatry.
DOUGLAS F. WELPTON, M.D., Teaching Fellow in Psychiatry.
BURTON WHITE, M.D., Teaching Fellow in Psychiatry.
EMMETT WILSON, JR., M.D., Teaching Fellow in Psychiatry.
RAYMOND C. YERKES, M.D., Teaching Fellow in Psychiatry.
STEPHEN L. ZASLOW, M.D., Teaching Fellow in Psychiatry.
HOWARD V. ZONANA, M.D., Teaching Fellow in Psychiatry.

Affiliated:

RANDOLPH K. BYERS, M.D., formerly Associate Clinical Professor
of Pediatrics.

Neurology

Required Courses

NEUROLOGY A. *Second Year*. — Clinical lectures are given at the Boston City and Massachusetts General Hospitals to the entire class. The object of the course is to give the student a general knowledge of the principles of diagnosis of diseases of the nervous system as a preparation for later work.

NEUROLOGY B. *Third Year*. — Clinical lectures are given in the third year at the Boston City and the Massachusetts General Hospitals. This course is to cover differential diagnosis and the principles of treatment. The members of the class are also required to work in the neurological service at the B.C.H. or M.G.H. in sections during the year. For this work the more didactic teaching of the second year serves as a necessary preparation. The work is practical in character and serves to bring the student into immediate contact with patients.

SECOND YEAR

HOURS

Clinical lectures. Dr. DENNY-BROWN, B.C.H. and Dr. ADAMS,
M.G.H.

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THIRD YEAR

Clinical lectures. Dr. DENNY-BROWN, B.C.H. and Dr. ADAMS,
M.G.H.

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HARVARD MEDICAL SCHOOL

Section teaching. B.C.H. and M.G.H. Each student attends ten or eleven two and a half-hour exercises in neurology. 33

Fourth Year Elective Courses

1. Neurology. Dr. DENNY-BROWN, B.C.H. Whole course (clerkship), all day.
2. Neurology. Dr. ADAMS, M.G.H. Whole course (clerkship), all day. Each course limited to two students each month.
3. Neurology. Dr. H. R. TYLER, P.B.B.H. Whole course, all day. Limited number. (Same course as Medicine 7 Medical Neurology.)
4. Neurology. Drs. TIMBERLAKE, ADAMS, and ASSOCIATES. Lemuel Shattuck Hospital. Whole course, all day. Limited number.
5. Pediatric Neurology. Dr. BARLOW and ASSOCIATES. C.M.C. Whole course all day. (Same course as Pediatrics 3i.)
6. Pediatric Neurology. Drs. DODGE, ADAMS, and ASSOCIATES. M.G.H. Whole course, all day. (Same course as Pediatrics 4d.)

Neuropathology

Required Course

NEUROPATHOLOGY A. *Second Year.*—The course consists of lectures, laboratory work, and demonstrations, amounting to fifty-four hours. The lectures introduce conceptions of value for the third year courses in neurology and psychiatry and for the neurological parts of courses in internal medicine and in surgery. Microscopical and gross specimens are studied.

SECOND YEAR

HOURS

Lectures and laboratory work. Dr. ADAMS and STAFF. Four times a week, for four and one-half weeks. 73

Fourth Year Elective Course

20. Laboratory work. Opportunities for research are available at the laboratories of the M.G.H., B.C.H., and H.M.S. Time and instructor to be arranged with Drs. ADAMS or DENNY-BROWN.

Psychiatry

Required Courses

First and Second Year: — The course titled Growth and Development (described on page 92) embraces and integrates with the first two years of required course in Psychiatry.

PSYCHIATRY A. *First Year.* — Normal Growth and Development; 16 lectures, 7 discussion sessions, and 7 clinics. Introduction to the development of the human personality. The course reviews the understanding of the human being, whether sick or well, and the foundation is laid for the more advanced course in psychopathology. The lectures deal with the development of the human personality in the setting of the family and the culture from infancy through childhood and adolescence to maturity and aging. Emphasis is laid upon the adjustment of normal personality types to various crises situations, the influence of anxiety and the significance of unconscious forces. Members of the psychiatric staff participate in the clinics designed to relate material of their course in the first year to problems of human development and variation.

PSYCHIATRY B. *Second Year.* — The second year consists of twenty lectures in abnormal growth and development to develop further concepts of psychological functioning. Emphasis shifts to the nature and genesis of abnormal psychological mechanisms which result from individual, social and physical factors and are manifested in symptoms and behavioral disturbances. Four additional hours are given to introduce methods of history taking and examination of patients designed to understand more fully socio-emotional factors in illness. The course includes lectures and clinical instruction in sections of four students on wards of the general hospitals. It is designed to serve as a preparation for the third year when the student will have direct contact with patients on hospital wards. Four three hour sections are given in cooperation with physical diagnosis. Members of the Psychiatry Department participate in laboratory periods organized for the study of organ systems as part of the integrated teaching program.

PSYCHIATRY C. *Third Year.* — The class is divided into small sections for the clinical study of patients. Each student studies individual cases in the wards of the Massachusetts Mental Health Center. During the

HARVARD MEDICAL SCHOOL

second half year, clinical lectures are given once a week at the Massachusetts Mental Health Center. The most important varieties of mental disorder are presented with emphasis upon early recognition of mental disease and methods of treatment.

PSYCHIATRY D. *Fourth Year.*—Each student serves as a clinical clerk for one month at the Massachusetts Mental Health Center, the Massachusetts General Hospital, or the McLean Hospital in conjunction with the Beth Israel Hospital, for out-patient work. Work with in-patients consists of the study of patients with various types of mental disorder and their treatment. The study and treatment of patients, with emphasis on the applications of psychiatry to general medical practice is given by the Harvard Teaching Unit of the Massachusetts Mental Health Center and the out-patient departments of the Massachusetts General and Beth Israel Hospitals. The psychiatric problems of children are discussed by staff members of the Judge Baker Foundation at the Children's Hospital, and by those associated with the M.M.H.C., M.G.H., and B.I.H.

FIRST YEAR

HOURS

PSYCHIATRY A. Lectures and discussion groups. Drs. LINDEMANN, GARDNER, BIBRING, and ASSOCIATES. Drs. DEWS, STANTON, ERVIN, coordinating committee for course in Growth and Development. 30

SECOND YEAR

PSYCHIATRY B. Lectures and section teaching. Drs. LINDEMANN, BIBRING, and ASSOCIATES. Dr. JOHN NEMIAH coordinator for course in Abnormal Growth and Development. In addition to twenty-two lectures, each student attends four three hour exercises as part of the course in physical diagnosis. 20
12

THIRD YEAR

PSYCHIATRY C. Lectures and section teaching. Drs. EWALT, SEMRAD, LUDWIG, P. SOLOMON, and ASSOCIATES. M.M.H.C. Each student attends at least ten three hour exercises. 44

FOURTH YEAR

PSYCHIATRY D. Clinical Clerkship. Drs. EWALT, HENDRICK, LINDEMANN, BIBRING, STANTON, and ASSOCIATES at the hospitals

NEUROLOGY AND PSYCHIATRY

concerned: D₁-M.M.H.C., D₂-M.G.H., D₃-McL.H. and B.I.H.

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Fourth Year Elective Courses

Adult Psychiatry

4. Dr. HENDRICK and ASSOCIATES. M.M.H.C.
5. Dr. LINDEMANN and ASSOCIATES. M.G.H.
6. Dr. STANTON and ASSOCIATES. McL.H.
7. Dr. BIBRING and ASSOCIATES. B.I.H.

Child Psychiatry

8. Dr. LAMONT and ASSOCIATES. M.G.H. (same course as Pediatrics 5).
9. Dr. ROCHLIN and ASSOCIATES. M.M.H.C.
10. Dr. GARDNER and ASSOCIATES. C.H.M.C. (same course as Pediatrics 6).
11. Drs. BIBRING, WERMER, and ASSOCIATES. B.I.H.

Voluntary Courses

32. The Nature of the Hypnotic State. M.M.H.C. Dr. ORNE and ASSOCIATES. Offered twice each year. One two hour meeting each week will be held for a total of about twenty. Time to be arranged. May be taken as a Voluntary Course by third year students at the discretion of the instructors.
33. Basic Concepts of Dynamic Psychiatry. M.G.H. Dr. ELIZABETH ZETZEL. Tuesdays, two hour seminar, time to be arranged. October through January. Open to third and fourth year students.

HARVARD MEDICAL SCHOOL

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

DUNCAN E. REID, M.D., A.M. (hon.), William Lambert Richardson Professor of Obstetrics, and Head of the Department of Obstetrics and Gynecology.

GEORGE VAN S. SMITH, M.D., W. H. Baker Professor of Gynecology, and Head of the Division of Gynecology.

LANGDON PARSONS, M.D., Clinical Professor of Obstetrics and Gynecology and Director of Alumni Relations.

HILTON A. SALHANICK, PH.D., M.D., Professor of Obstetrics and Gynecology at the Beth Israel Hospital.

SOMERS H. STURGIS, M.D., Clinical Professor of Gynecology.

BENJAMIN TENNEY, JR., M.D., Clinical Professor of Obstetrics and Gynecology.

HOWARD ULFELDER, M.D., Joe Vincent Meigs Professor of Gynecology.

FRANCIS M. INGERSOLL, M.D., Associate Clinical Professor of Gynecology.

FRANKLIN F. SNYDER, M.D., A.M. (hon.), Associate Professor of Anatomy and Obstetrics.

DANIEL ABRAMSON, M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

CHRISTOPHER J. DUNCAN, M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

CHARLES L. EASTERDAY, M.D., Assistant Professor of Obstetrics and Gynecology at the Boston Lying-in Hospital.

THOMAS H. GREEN, JR., M.D., Assistant Clinical Professor of Gynecology.

ROBERT W. KISTNER, M.D., Assistant Professor of Obstetrics and Gynecology at the Free Hospital for Women.

ALAN B. LITTLE, M.D., C.M., Assistant Professor of Obstetrics and Gynecology and Tutor in Medical Science.

OLIVE W. SMITH, PH.D., Sc.D. (hon.), Assistant Professor of Biological Chemistry in the Department of Obstetrics and Gynecology at the Free Hospital for Women.

OBSTETRICS AND GYNECOLOGY

- MELVIN L. TAYMOR, M.D., Assistant Clinical Professor of Gynecology.
- PAUL A. YOUNGE, M.D., Assistant Clinical Professor of Gynecology.
- ROBERT H. BARKER, M.D., Clinical Associate in Obstetrics and Gynecology.
- RICHARD H. GROGAN, M.D., Clinical Associate in Obstetrics and Gynecology.
- HERBERT W. HORNE, JR., M.D., Clinical Associate in Obstetrics and Gynecology.
- JOHN F. JEWETT, M.D., Clinical Associate in Obstetrics and Gynecology.
- WILLIAM J. MULLIGAN, M.D., Clinical Associate in Obstetrics and Gynecology.
- HAROLD W. RUBIN, M.D., Clinical Associate in Obstetrics and Gynecology.
- HARRY N. ANTONIADES, PH.D., Research Associate in Biological Chemistry in the Department of Obstetrics and Gynecology.
- NANCY A. CHENEY, M.D., Research Associate in Obstetrics and Gynecology.
- PHILIP A. DRINKER, PH.D., Research Associate in Obstetrics and Gynecology.
- DAVID H. GALLANT, PH.D., Research Associate in Obstetrics and Gynecology.
- ILSE J. GORBACH, M.D., Research Associate in Obstetrics and Gynecology.
- JOHN A. MACLAREN, PH.D., Research Associate in Obstetrics and Gynecology.
- WERNER E. SCHREINER, M.D., Research Associate in Obstetrics and Gynecology.
- MAURICE O. BELSON, M.D., Instructor in Obstetrics and Gynecology.
- MARION F. EADES, M.D., Instructor in Obstetrics and Gynecology.
- CELSE R. GARCÍA, M.D., Instructor in Obstetrics and Gynecology.
- A. GORDON GAULD, M.D., Instructor in Obstetrics and Gynecology.

HARVARD MEDICAL SCHOOL

LUKE GILLESPIE, M.D., Instructor in Obstetrics and Gynecology.
ARTHUR C. GORBACH, M.D., Instructor in Obstetrics and Gynecology.

WARD I. GREGG, M.D., Instructor in Gynecology.

CRAWFORD H. HINMAN, M.D., Instructor in Obstetrics and Gynecology.

RUBY G. JACKSON, M.D., C.M., Instructor in Obstetrics and Gynecology.

HOWARD N. JACOBSON, M.D., Instructor in Obstetrics and Gynecology and Tutor in Medical Science.

DAVID E. KOPANS, M.D., Instructor in Obstetrics and Gynecology.

FRANCIS R. LANE, M.D., Instructor in Obstetrics and Gynecology.

THOMAS LEAVITT, JR., M.D., Instructor in Obstetrics and Gynecology.

HERBERT T. LEIGHTON, M.D., Instructor in Obstetrics and Gynecology.

JACOB MEZER, M.D., Instructor in Obstetrics and Gynecology.

JOHN L. NEWELL, M.D., Instructor in Obstetrics and Gynecology.

LLOYD I. SEXTON, M.D., Instructor in Obstetrics and Gynecology.

BARTLETT H. STONE, M.D., Instructor in Obstetrics and Gynecology.

ARTHUR W. TUCKER, JR., M.D., Instructor in Obstetrics and Gynecology.

ALBERT E. WEINER, M.D., Instructor in Obstetrics and Gynecology.

DAVID WEINTRAUB, M.D., Instructor in Obstetrics and Gynecology.

JAMES H. AUSTIN, M.D., Assistant in Obstetrics and Gynecology.

HERBERT E. BROOKS, JR., M.D., Assistant in Obstetrics and Gynecology.

ROBERT W. BROWN, M.D., Assistant in Obstetrics and Gynecology.

MAX J. BULIAN, M.D., Assistant in Obstetrics and Gynecology.

LOUIS BURKE, M.D., Assistant in Obstetrics and Gynecology.

ROBERT V. DANDROW, JR., M.D., Assistant in Obstetrics and Gynecology.

OBSTETRICS AND GYNECOLOGY

- JOHN J. DRISCOLL, M.D., Assistant in Obstetrics and Gynecology.
CHARLES T. GRIFFITHS, M.D., Assistant in Obstetrics and Gynecology (resigned August 31, 1963).
ALBERT Y. KEVORKIAN, M.D., Assistant in Gynecology.
JACK H. MARCOVITCH, M.D., Assistant in Obstetrics and Gynecology.
JOSEPH H. PHILLIPS, M.D., Assistant in Gynecology.
PETER G. ROBBINS, M.D., Assistant in Obstetrics and Gynecology.
SEYMOUR SACKS, M.D., Assistant in Obstetrics and Gynecology.
LEONARD E. SAFON, M.D., Assistant in Obstetrics and Gynecology.
BERNARDO A. SANTAMARINA, M.D., Assistant in Obstetrics and Gynecology.
ARTHUR J. SCHRAMM, M.D., Assistant in Obstetrics and Gynecology.
WESTON F. SEWALL, M.D., Assistant in Obstetrics and Gynecology.
SIDNEY STAHLER, M.D., Assistant in Obstetrics and Gynecology.
JOSEPH S. WALLACE, M.D., Assistant in Obstetrics and Gynecology.
CLEMENT YAHIA, M.D., Assistant in Obstetrics and Gynecology.
JOSEPH J. BARLOW, M.D., Research Fellow in Obstetrics and Gynecology.
RONALD E. BATT, M.D., Research Fellow in Obstetrics and Gynecology (from August 1, 1963).
STEWART L. MARCUS, M.D., Research Fellow in Obstetrics and Gynecology.
GILLEN J. STEINER, M.D., Research Fellow in Obstetrics and Gynecology (from September 1, 1963).
ANN R. B. BARNES, M.D., Teaching Fellow in Obstetrics and Gynecology.
THEODORE C. BARTON, M.D., Teaching Fellow in Obstetrics and Gynecology.
LUIS C. W. DUPONT, M.D., Teaching Fellow in Obstetrics and Gynecology.
CHARLES F. EADES, M.D., Teaching Fellow in Obstetrics and Gynecology.

HARVARD MEDICAL SCHOOL

THEODORE FAINSTAT, M.D., C.M., Teaching Fellow in Obstetrics and Gynecology (appointment expired December 31, 1963).

HAROLD J. GINSBURG, M.D., Teaching Fellow in Obstetrics and Gynecology.

SIDNEY D. GINSBURG, M.D., Teaching Fellow in Obstetrics and Gynecology.

SUMNER GOCHBERG, M.D., Teaching Fellow in Obstetrics and Gynecology.

DONALD A. GOSS, M.D., Teaching Fellow in Obstetrics and Gynecology.

JOHN W. GROVER, M.D., Teaching Fellow in Obstetrics and Gynecology.

ARTHUR L. HERBST, M.D., Teaching Fellow in Obstetrics and Gynecology.

HUGH R. HOLTROP, M.D., Teaching Fellow in Obstetrics and Gynecology.

JOHN B. JOSIMOVICH, M.D., Teaching Fellow in Obstetrics and Gynecology.

JOHN M. LEVENTHAL, M.D., Teaching Fellow in Obstetrics and Gynecology (from October 1, 1963).

JOHN L. LEWIS, JR., M.D., Teaching Fellow in Obstetrics.

ABDEL-AZIZ MARZOUK, M.B., CH.B., Teaching Fellow in Obstetrics and Gynecology.

ALLAN G. ROSENFELD, M.D., Teaching Fellow in Obstetrics and Gynecology.

ROBERT L. SHIRLEY, M.D., Teaching Fellow in Obstetrics and Gynecology.

ROBERT W. WOODWARD, M.D., Teaching Fellow in Obstetrics and Gynecology.

Required Courses

Second Year. — Whole class exercises in conjunction with the Departments of Medical Science and of the several clinical disciplines, covering the broad aspects of the physiology of reproduction and of femaleness from infancy to senility. In the second year the Department of Obstetrics and Gynecology contributes to a series of prac-

OBSTETRICS AND GYNECOLOGY

tical exercises in physical diagnosis which introduces the student to basic clinical techniques.

Third Year. — During the year twenty lectures on selected subjects are given at the Harvard Medical School. In addition, one month is devoted to instruction in the out-patient clinics and wards of the Boston City Hospital, the Boston Lying-in Hospital, the Free Hospital for Women, and the gynecologic services of the Massachusetts General Hospital and the Peter Bent Brigham Hospital. Afternoon seminars are conducted to supplement the lectures and out-patient instruction and to foster student participation.

Fourth Year. — The student devotes one month to clinical obstetrics and gynecology at the Boston City Hospital, the Beth Israel Hospital, the Boston Lying-in Hospital, and the Free Hospital for Women. He participates in the management of labor and delivery and takes part in the care of the mother and her infant during their hospital stay. Also, he receives instruction in the interaction of medical and surgical disease in pregnancy and gynecological conditions, and assists at operations. In addition, he attends Obstetric and Medical Grand Rounds and Clinicopathological Conferences at the Boston Lying-in Hospital and the Free Hospital for Women.

SECOND YEAR

HOURS

Participation in pathophysiology endocrine system.	18
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THIRD YEAR

Lectures. Drs. REID, SMITH, STURGIS, TENNEY, SALHANICK, ULFELDER, and ASSOCIATES.	20
Practical instruction and seminars in clinical obstetrics and gynecology.	140

FOURTH YEAR

Clinical obstetrics and gynecology. Drs. REID, SMITH, SALHANICK, TENNEY, and ASSOCIATES.	144
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Fourth Year Elective Courses

Gynecology. The fourth year student may devote an elective month to gynecology at the Free Hospital for Women, the Massachusetts General Hospital, or the Peter Bent Brigham Hospital. This

HARVARD MEDICAL SCHOOL

consists of case teaching, whose objective is to correlate medical science and the several clinical disciplines with the diagnosis and management of the diseases of women. The student will be given the opportunity to follow gynecologic patients completely through their hospital course from the pre-operative work-up, through the operative experience, and on the wards to their discharge. He will be given the opportunity to review the basic disciplines of physiology and endocrinology, through reading or in the laboratory, as they apply to the material. Drs. SMITH, STURGIS, and ULFELDER. Whole course, all day.

OPHTHALMOLOGY

DEPARTMENT OF OPHTHALMOLOGY

DAVID G. COGAN, M.D., Henry Willard Williams Professor of Ophthalmology, Head of the Department, and Director of the Howe Laboratory of Ophthalmology.

HENRY F. ALLEN, M.D., Assistant Clinical Professor of Ophthalmology.

CARL C. JOHNSON, M.D., Assistant Clinical Professor of Ophthalmology.

PAUL BOEDER, PH.D., Lecturer on Ophthalmology.

BRENDAN D. LEAHEY, M.D., Clinical Associate in Ophthalmology.

CHARLES L. SCHEPENS, M.D., Clinical Associate in Ophthalmology.

ALBERT E. SLOANE, M.D., Clinical Associate in Ophthalmology.

TAYLOR R. SMITH, M.D., Clinical Associate in Ophthalmology.

GARRETT L. SULLIVAN, JR., M.D., Clinical Associate in Ophthalmology.

ENDRE A. BALAZS, M.D., Lecturer on Ophthalmology.

RUSSELL L. CARPENTER, PH.D., Lecturer on Ophthalmology.

MICHIO OIKAWA, M.D., PH.D., Research Associate in Ophthalmology (resigned October 31, 1963).

LAWRENCE STARK, M.D., Research Associate in Ophthalmology.

HARRY E. BRACONIER, M.D., Instructor in Ophthalmology.

ROBERT J. BROCKHURST, M.D., Instructor in Ophthalmology.

THOMAS J. A. CAVANAUGH, M.D., C.M., Instructor in Ophthalmology.

JULIAN F. CHISHOLM, JR., M.D., Instructor in Ophthalmology.

JOSEPH M. CLOUGH, M.D., Instructor in Ophthalmology.

CLAES-HENRIK DOHLMAN, M.D., PH.D., Instructor in Ophthalmology.

MAHLON T. EASTON, M.D., Instructor in Ophthalmology.

MASANDO HAYASHI, M.D., PH.D., Instructor in Ophthalmology.

ROBERT J. HERM, M.D., Instructor in Ophthalmology.

JOHN M. HILL, M.D., Instructor in Ophthalmology.

SUMNER D. LIEBMAN, M.D., Instructor in Ophthalmology.

HENRY A. MOSHER, M.D., Instructor in Ophthalmology.

HARVARD MEDICAL SCHOOL

- RICHARD B. PIPPITT, M.D., Instructor in Ophthalmology.
ABRAHAM POLLEN, M.D., Instructor in Ophthalmology.
CHARLES D. J. REGAN, M.D., Instructor in Ophthalmology.
KARL RIEMER, M.D., Instructor in Ophthalmology.
ALFRED W. SCOTT, M.D., Instructor in Ophthalmology.
EARL S. SEALE, M.D., Instructor in Ophthalmology.
ERNST G. G. WOLF, PH.D., Instructor in Ophthalmology.
SAUL A. BORUCHOFF, M.D., Assistant in Ophthalmology.
FREDERIC B. BREED, M.D., Assistant in Ophthalmology.
RICHARD B. CHAPMAN, M.D., Assistant in Ophthalmology.
THOMAS P. CRONIN, M.D., Assistant in Ophthalmology.
CARL G. FREESE, JR., M.D., Assistant in Ophthalmology.
EPHRAIM FRIEDMAN, M.D., Assistant in Ophthalmology.
RALPH H. HINCKLEY, M.D., Assistant in Ophthalmology.
ROBERT C. LAWLOR, M.D., Assistant in Ophthalmology (from December 1, 1963).
BYRON S. LINGEMAN, M.D., Assistant in Ophthalmology.
JOHN W. McMEEL, M.D., Assistant in Ophthalmology.
BARUCH J. SACHS, M.D., Assistant in Ophthalmology.
DAVID H. SCOTT, M.D., Assistant in Ophthalmology.
RICHARD J. SIMMONS, M.D., Assistant in Ophthalmology.
WILLIAM STONE, JR., M.D., Assistant in Ophthalmology.
FRANCIS J. WEST, M.D., Assistant in Ophthalmology.
MICHAEL WIEDMAN, M.D., Assistant in Ophthalmology.
JACK E. GOLDSTEIN, M.D., Research Fellow in Ophthalmology.
LLOYD M. AIELLO, M.D., Teaching Fellow in Ophthalmology (from October 1, 1964).
CHARLES K. BEYER, M.D., Teaching Fellow in Ophthalmology.
ROLAND E. HOULE, M.D., Teaching Fellow in Ophthalmology (from January 1, 1964).
GEORGE M. HOWARD, M.D., Teaching Fellow in Ophthalmology (appointment expired February 1, 1964).
ROBERT S. L. KINDER, M.D., Teaching Fellow in Ophthalmology (appointment expired February 1, 1964).
ARNOLD J. KROLL, M.D., Teaching Fellow in Ophthalmology (from January 1, 1964).

OPHTHALMOLOGY

DONALD R. WEIS, M.D., Teaching Fellow in Ophthalmology
(appointment expired April 1, 1964).

Required Courses

First Year. — Lecture in anatomy and physiology of the eye.

Second Year. — Lecture in pathology and pharmacology of the eye.

Third Year. — Instruction in clinical ophthalmology.

THIRD YEAR

HOURS

Thirteen clinical exercises. M.E.E.I.	35
Lectures on clinical ophthalmology. H.M.S., second half-year.	4

Fourth Year Elective Course

1. Clinical Ophthalmology. Dr. ALFRED W. SCOTT and ASSOCIATES.
M.E.E.I. Whole course, all day.

HARVARD MEDICAL SCHOOL

HOWE LABORATORY OF OPHTHALMOLOGY

DAVID G. COGAN, M.D., Henry Willard Williams Professor of Ophthalmology, Head of the Department, and Director of the Howe Laboratory of Ophthalmology.

W. MORTON GRANT, M.D., Associate Professor of Ophthalmology at the Massachusetts Eye and Ear Infirmary.

DAVID D. DONALDSON, M.D., Assistant Professor of Ophthalmology at the Massachusetts Eye and Ear Infirmary.

JIN H. KINOSHITA, PH.D., Assistant Professor of Biological Chemistry at the Massachusetts Eye and Ear Infirmary.

CARL KUPFER, M.D., Assistant Professor of Ophthalmology at the Massachusetts Eye and Ear Infirmary.

TOICHIRO KUWABARA, M.D., Assistant Professor of Ophthalmology at the Massachusetts Eye and Ear Infirmary.

SIDNEY FUTTERMAN, PH.D., Associate in Biological Chemistry in the Department of Ophthalmology at the Massachusetts Eye and Ear Infirmary.

JOHN S. ANDREWS, JR., PH.D., Instructor in Ophthalmic Research.

ABRAHAM SPECTOR, PH.D., Instructor in Ophthalmic Research.

JEREMY B. WHITNEY, M.D., Assistant in Ophthalmology.

JAMES H. ELLIOTT, M.D., Research Fellow in Ophthalmology.

SELMA HAYMAN, PH.D., Research Fellow in Ophthalmology.

HENRY T. J. MOUNT, M.D., Research Fellow in Ophthalmology.

The Howe Laboratory of Ophthalmology was founded in 1927 by the late Dr. Lucien Howe. A sum of money equal to that initially given by Dr. Howe was donated by the Rockefeller Foundation. Laboratory space was provided by the Massachusetts Eye and Ear Infirmary.

The purpose of the Laboratory is to advance ophthalmology; its researches are not restricted to any particular phase of this science. Advantage is taken of the rich clinical material of the Infirmary. While the Laboratory is purely an institution for research, the services of the various members of the staff are available for teaching in the Harvard Medical School and for assistance in the clinical work of the Infirmary.

ORTHOPEDIC SURGERY

DEPARTMENT OF ORTHOPEDIC SURGERY

JOSEPH S. BARR, M.D., John Ball and Buckminster Brown Professor of Orthopedic Surgery, and Head of the Department at the Massachusetts General Hospital.

WILLIAM T. GREEN, M.D., A.M. (hon.), Harriet M. Peabody Professor of Orthopedic Surgery, and Head of the Department at The Children's Hospital.

THORNTON BROWN, M.D., Associate Clinical Professor of Orthopedic Surgery.

MELVIN J. GLIMCHER, M.D., Associate Professor of Orthopedic Surgery at the Massachusetts General Hospital.

OTTO E. AUFRANC, M.D., Assistant Clinical Professor of Orthopedic Surgery.

JONATHAN COHEN, M.D., Assistant Clinical Professor of Orthopedic Surgery.

PAUL W. HUGENBERGER, M.D., Lecturer on Orthopedic Surgery.

HENRY H. BANKS, M.D., Clinical Associate in Orthopedic Surgery.

ARTHUR W. TROTT, M.D., Clinical Associate in Orthopedic Surgery.

ANTHONY L. ANDRIKIDES, PH.D., Research Associate in Biological Chemistry in the Department of Orthopedic Surgery.

ELTON P. KATZ, PH.D., Research Associate in Biological Chemistry in the Department of Orthopedic Surgery.

MURRAY V. KING, PH.D., Research Associate in Biological Chemistry in the Department of Orthopedic Surgery.

GERALD L. MECHANIC, PH.D., Research Associate in Biological Chemistry in the Department of Orthopedic Surgery.

DOROTHY F. TRAVIS, PH.D., Research Associate in Biology in the Department of Orthopedic Surgery.

THOMAS L. DELORME, M.D., Instructor in Orthopedic Surgery.

WILLIAM A. ELLISTON, M.B., CH.B., Instructor in Orthopedic Surgery.

HARVARD MEDICAL SCHOOL

- PAUL P. GRIFFIN, M.D., Instructor in Orthopedic Surgery.
WILLIAM H. HARRIS, M.D., Instructor in Orthopedic Surgery.
WILLIAM N. JONES, M.D., Instructor in Orthopedic Surgery.
WILLIAM L. KERMOND, M.B., B.S., Instructor in Orthopedic Surgery.
J. DRENNAN LOWELL, M.D., Instructor in Orthopedic Surgery.
WILLIAM R. MACAUSLAND, JR., M.D., Instructor in Orthopedic Surgery.
RICHARD A. MAYO, M.D., Instructor in Orthopedic Surgery.
EUGENE E. RECORD, M.D., Instructor in Orthopedic Surgery.
EDWARD J. RISEBOROUGH, M.B., CH.B., Instructor in Orthopedic Surgery.
CARTER R. ROWE, M.D., Instructor in Orthopedic Surgery.
MORTEN SMITH-PETERSEN, M.D., Instructor in Orthopedic Surgery.
ROBERT ULIN, M.D., Instructor in Orthopedic Surgery.
EDWIN T. WYMAN, JR., M.D., Instructor in Orthopedic Surgery.
FRANK D. BATES, M.D., Assistant in Orthopedic Surgery.
ROBERT B. BRENDZE, M.D., Assistant in Orthopedic Surgery.
RICHARD G. EATON, M.D., Assistant in Orthopedic Surgery.
JAMES G. MANSON, M.B., CH.B., Assistant in Orthopedic Surgery
(from October 1, 1963).
EDWARD A. NALEBUFF, M.D., Assistant in Orthopedic Surgery.
MIHRAN O. TACHDJIAN, M.D., Assistant in Orthopedic Surgery.
CAMILLE J. FRANCOIS, M.D., Research Fellow in Orthopedic Surgery.
ULF A. FRIBERG, M.D., Research Fellow in Orthopedic Surgery
(appointment expired August 31, 1963).
SAMUEL R. KAMHI, PH.D., Research Fellow in Orthopedic Surgery.
BRONNETTA L. SCOTT, PH.D., Research Fellow in Orthopedic Surgery.
HUGH CHANDLER, M.D., Teaching Fellow in Orthopedic Surgery
(appointment expires March 31, 1964).
GORDON F. LUPIEN, M.D., Teaching Fellow in Orthopedic Surgery
(from October 1, through December 31, 1963).

ORTHOPEDIC SURGERY

JAMES G. MANSON, M.B., CH.B., Teaching Fellow in Orthopedic Surgery (appointment expired September 30, 1963).

JOHN J. MONAHAN, M.D., Teaching Fellow in Orthopedic Surgery (appointment expired December 31, 1963).

ARTHUR M. PAPPAS, M.D., Teaching Fellow in Orthopedic Surgery (from January 1, 1964).

EDGAR B. THOMPSON, 3RD., M.D., Teaching Fellow in Orthopedic Surgery (from April 1, 1964).

SEYMOUR ZIMBLER, M.D., Teaching Fellow in Orthopedic Surgery (from October 1, 1963).

Required Course

ORTHOPEDIC SURGERY A. *Third Year.*—Instruction is given in orthopedic surgery by lectures at The Children's Hospital Medical Center and the Massachusetts General Hospital in the first half of the third year, and in sections throughout the third year by clinical exercises at The Children's Hospital Medical Center, the Massachusetts General Hospital, the Peter Bent Brigham Hospital, and the Beth Israel Hospital.

THIRD YEAR	HOURS
Lectures. Drs. BARR, GREEN, and ASSOCIATES. C.H.M.C.	8
Clinical exercises. Drs. BARR, GREEN, and ASSOCIATES. M.G.H., C.H.M.C., P.B.B.H., and B.I.H. In sections throughout the year.	80

Thirty-five of these hours are clinical exercises in orthopedic surgery and surgery of trauma in adults which are correlated with clinical exercises in general surgery at the Massachusetts General Hospital, the Peter Bent Brigham Hospital and the Beth Israel Hospital during the surgery assignment to these hospitals. Forty-five hours are clinical exercises in general and pediatric orthopedic surgery at The Children's Hospital Medical Center.

FOURTH YEAR

Clinical exercises and assignments are provided in correlation with the prescribed general surgical course at the B.I.H., M.G.H., and P.B.B.H.

HARVARD MEDICAL SCHOOL

Fourth Year Elective Courses

1. Clinical Course. Dr. BARR and ASSOCIATES. M.G.H. Whole course, all day. Limited to two students each month.
2. Clinical Course. Dr. GREEN and ASSOCIATES. C.H.M.C. Whole course, all day. Limited to two students each month.
3. Clinical Course. Drs. GREEN, BARR, and ASSOCIATES. C.H.M.C. and M.G.H. Whole course, all day. Limited to two students each month.

OTOLOGY AND LARYNGOLOGY

DEPARTMENT OF OTOLOGY AND LARYNGOLOGY

HAROLD F. SCHUKNECHT, M.D., A.M. (hon.), Walter Augustus Lecompte Professor of Otology, Professor of Laryngology, and Head of the Department.

GEORGE F. REED, M.D., Assistant Clinical Professor of Laryngology.

JOHN R. RICHARDSON, M.D., Assistant Clinical Professor of Laryngology.

FRANCIS L. WEILLE, M.D., Assistant Clinical Professor of Otology.

WILLIAM W. MONTGOMERY, M.D., Clinical Associate in Otology.

NELSON Y. KIANG, PH.D., Research Associate in Otolaryngology.

ROBERT S. KIMURA, A.B., Research Associate in Otolaryngology.

SWIATOPOLK P. MARFEY, PH.D., Research Associate in Biological Chemistry in the Department of Otology and Laryngology.

WALTER A. ROSENBLITH, ING.RAD., Research Associate in Otolaryngology.

HUGO D. ANGELINI, M.D., Instructor in Otolaryngology.

JOSHUA C. DROOKER, M.D., Instructor in Otolaryngology.

CHARLES F. FERGUSON, M.D., Instructor in Otolaryngology.

CARLYLE G. FLAKE, M.D., Instructor in Otolaryngology.

ALLAN C. GOODMAN, PH.D., Instructor in Otology.

LOUIS E. GRIFFEY, M.D., Instructor in Otolaryngology.

CHARLES KENT, M.D., Instructor in Laryngology.

ROBERT E. KLOTZ, M.D., Instructor in Otology.

JOSEPH LENTINE, M.D., Instructor in Otolaryngology.

DONALD K. LEWIS, M.D., Instructor in Otology and Laryngology.

MICHAEL M. PAPARELLA, M.D., Instructor in Otolaryngology.

ARAM ROOPENIAN, M.D., Instructor in Otolaryngology.

WERNER D. CHASIN, M.D., Assistant in Otolaryngology.

GEZA J. JAKO, M.D., Assistant in Otolaryngology.

SIDNEY SHORE, M.D., Assistant in Otolaryngology.

ALFRED D. WEISS, M.D., Assistant in Otolaryngology.

YALE J. BERRY, M.D., Teaching Fellow in Otolaryngology.

HARVARD MEDICAL SCHOOL

ALLAN G. EDWARDS, JR., M.D., Teaching Fellow in Otolaryngology.

RICHARD R. GACEK, M.D., Teaching Fellow in Otolaryngology.

ROY A. JOHNSON, M.D., Teaching Fellow in Otolaryngology.

DONALD G. KEAMY, M.D., Teaching Fellow in Otolaryngology.

Affiliated:

JOHN S. IRWIN, M.D., Research Associate in Microcirculation,
M.I.T.

Required Course

OTOLOGY and LARYNGOLOGY A. *Third Year*.—Instruction is given by lectures at the Harvard Medical School and clinical instruction in the third year in sections, each student receiving instruction every morning for two weeks at the M.E.E.I.

THIRD YEAR	HOURS
Clinical exercises. Dr. SCHUKNECHT and ASSOCIATES. M.E.E.I. Ten or twelve exercises for each student.	30
Lectures in Otology. Dr. SCHUKNECHT.	4
Lectures in Laryngology. Drs. RICHARDSON AND REED.	4

Fourth Year Elective Courses

1. Clinical Otology. Dr. SCHUKNECHT and ASSOCIATES. M.E.E.I.
Half-course, mornings, offered throughout the year.
 2. Clinical Laryngology. Dr. SCHUKNECHT and ASSOCIATES. M.E.E.I.
Half-course, mornings, offered throughout the year.
- (These courses are limited to two students each month.)

PATHOLOGY

DEPARTMENT OF PATHOLOGY

ARTHUR T. HERTIG, M.D., Shattuck Professor of Pathological Anatomy, and Head of the Department (on sabbatical leave January 1 through June 30, 1964).

BENJAMIN CASTLEMAN, M.D., Professor of Pathology at the Massachusetts General Hospital.

JOHN M. CRAIG, M.D., Clinical Professor of Pathology.

GUSTAVE J. DAMMIN, M.D., Elsie T. Friedman Professor of Pathology.

SIDNEY FARBER, M.D., Professor of Pathology at The Children's Hospital.

DAVID G. FREIMAN, M.D., Professor of Pathology at the Beth Israel Hospital.

WILLIAM A. MEISSNER, M.D., Clinical Professor of Pathology.

RUY PEREZ-TAMAYO, M.D., Visiting Professor of Pathology (from February 1, 1964).

SHIELDS WARREN, M.D., D.Sc. (hon.), Professor of Pathology at the New England Deaconess Hospital, and Head of The Division of Forensic Pathology — Department of Legal Medicine.

THOMAS C. JONES, D.V.M., Associate Clinical Professor of Pathology.

PHILIP M. Lecompte, M.D., Associate Clinical Professor of Pathology.

GUIDO MAJNO, M.D., A.M. (hon.), Associate Professor of Pathology (Acting Head of the Department January 1 through June 30, 1964).

EDGAR B. TAFT, M.D., Associate Clinical Professor of Pathology and Tutor in Pathology.

WALLACE H. CLARK, JR., M.D., Assistant Professor of Pathology at the Massachusetts General Hospital.

RICHARD B. COHEN, M.D., Assistant Professor of Pathology at the Massachusetts General Hospital.

BRADLEY E. COPELAND, M.D., Assistant Clinical Professor of Pathology.

HARVARD MEDICAL SCHOOL

GEORGE W. CURTIS, M.D., Assistant Clinical Professor of Pathology.

OLIVE GATES, M.D., Assistant Clinical Professor of Pathology.

EARL "E" HELLERSTEIN, M.D., Assistant Professor of Pathology.

MORRIS J. KARNOVSKY, M.B., CH.B., Assistant Professor of Pathology.

JOHANNES P. KULKA, M.D., Assistant Clinical Professor of Pathology.

FRANZ VON LICHTENBERG, M.D., Assistant Professor of Pathology at the Peter Bent Brigham Hospital.

RICHARD A. MACDONALD, M.D., Assistant Professor of Pathology.

AGNES B. RUSSFIELD, PH.D., M.D., Assistant Professor of Pathology at The Children's Hospital.

ROBERT E. SCULLY, M.D., Assistant Clinical Professor of Pathology.

RONALD C. SNIFFEN, M.D., Assistant Clinical Professor of Pathology.

GORDON F. VAWTER, M.D., Assistant Clinical Professor of Pathology.

AUSTIN L. VICKERY, JR., M.D., Assistant Clinical Professor of Pathology.

ROBERT FIENBERG, M.D., Lecturer on Pathology.

HERMANN LISCO, M.D., Lecturer on Pathology at the New England Deaconess Hospital.

BERNARD F. TRUM, D.V.M., Lecturer on Veterinary Medicine in the Department of Pathology, Director of the Animal Research Center and Director of the New England Regional Primate Research Center.

LEONARD ATKINS, M.D., Clinical Associate in Pathology.

JAMES B. CAULFIELD, M.D., Associate in Pathology at the Massachusetts General Hospital.

JOSEPH M. CORSON, M.D., Associate in Pathology at the Peter Bent Brigham Hospital.

RAMZI S. COTRAN, M.D., Associate in Pathology.

JOHN E. CRAIGHEAD, M.D., Associate in Pathology.

PATHOLOGY

SHIRLEY G. DRISCOLL, M.D., Associate in Pathology at the Boston Lying-in Hospital.

JAMES T. DUHIG, M.B., CH.B., Clinical Associate in Pathology.

ROBERT L. EHRLMANN, M.D., Clinical Associate in Pathology.

MARTIN H. FLAX, PH.D., M.D., Associate in Pathology at the Massachusetts General Hospital.

THOMAS J. GILL, 3D., M.D., Associate in Pathology.

HAZEL M. GORE, M.B., CH.B., Associate in Pathology.

SI-CHUN MING, M.D., Clinical Associate in Pathology.

REUBEN Z. SCHULZ, M.D., Clinical Associate in Pathology.

ARON E. SZULMAN, M.B., CH.B., Clinical Associate in Pathology.

PRISCILLA D. TAFT, M.D., Clinical Associate in Pathology.

IRA GORE, M.D., Lecturer on Pathology.

LEONARD S. GOTTLIEB, M.D., Lecturer on Pathology.

JAMES H. GRAHAM, M.D., Lecturer on Pathology.

G. KENNETH MALLORY, M.D., Lecturer on Pathology.

WALTER G. J. PUTSCHAR, M.D., Lecturer on Pathology.

STANLEY L. ROBBINS, M.D., Lecturer on Pathology.

HENRY UNGAR, M.D., Visiting Lecturer on Pathology (September 1 through November 30, 1963).

RICHARD A. ADAMS, PH.D., Research Associate in Pathology.

ROGELIO ALARCON, M.D., Research Associate in Pathology.

GIUSEPPE CARDINALI, M.D., Research Associate in Pathology (resigned November 30, 1963).

MARGARIDA DE M. DEDERICK, M.D., Research Associate in Pathology.

SAMUEL S. EPSTEIN, M.D., Research Associate in Pathology.

GEORGE E. FOLEY, D.Sc., Research Associate in Pathology.

LIPPMAN H. GERONIMUS, PH.D., Research Associate in Pathology.

MORRIS N. GREEN, PH.D., Research Associate in Pathology.

ALFRED H. HANDLER, PH.D., Research Associate in Pathology.

RAUL H. HOUSSAY, M.D., Research Associate in Pathology.

DAVID L. JOFTES, PH.D., Research Associate in Pathology.

LORNA D. JOHNSON, M.D., Research Associate in Pathology.

CHARLOTTE L. MADDOCK, PH.D., Research Associate in Pathology.

SERGIO MAGALINI, M.D., Research Associate in Pathology.

HARVARD MEDICAL SCHOOL

ARLENE C. L. MAZZONE, PH.D., Research Associate in Pathology.
ROBERT E. MCCARTHY, PH.D., Research Associate in Pathology.
EDWARD J. MODEST, PH.D., Research Associate in Pathology.
FELIX RODRIGUEZ Y LEGASPI, M.D., Research Associate in Pathology.

ELLIOTT W. STRAUSS, M.D., Research Associate in Pathology.

BETTY B. G. UZMAN, M.D., Research Associate in Pathology.

GEORGE YERGANIAN, PH.D., Research Associate in Pathology.

KAROLY BALOGH, M.D., Instructor in Pathology.

GLENNA J. CORLEY, M.D., Instructor in Pathology.

DIANE W. CROCKER, M.D., Instructor in Pathology.

CHARLES J. DE WAN, M.D., Instructor in Pathology.

DONALD FELDMAN, M.D., Instructor in Pathology.

GILBERT H. FRIEDEL, M.D., Instructor in Pathology.

JOHN D. HOUGHTON, M.D., Instructor in Pathology.

JOSEPH S. INCZE, M.D., Instructor in Pathology.

HUBERT JOCKIN, M.D., Instructor in Pathology.

OLGA C. LEARY, M.D., Instructor in Pathology.

MERLE A. LEGG, M.D., C.M., Instructor in Pathology.

MAX M. LEVENE, M.D., Instructor in Pathology.

JULIO LEVY, M.D., Instructor in Pathology.

ARTHUR A. LIKE, M.D., Instructor in Pathology.

MIRIAM MOLDVEEN (GERONIMUS), M.D., Instructor in Pathology.

ARTHUR E. O'DEA, M.D., Instructor in Pathology.

GISELLE S. PECHET, M.D., Instructor in Pathology.

JOHN A. PETERS, M.D., Instructor in Pathology.

EDWARD S. REYNOLDS, JR., M.D., Instructor in Pathology.

SANFORD I. ROTH, M.D., Instructor in Pathology.

STEPHEN M. SHEA, M.B., CH.B., Instructor in Mathematical Biology in the Department of Pathology.

GEORGE T. SMITH, M.D., Instructor in Pathology.

JOE SUYEMOTO, M.D., Instructor in Pathology.

HAROLD J. WHITE, M.D., Instructor in Pathology.

THOMAS E. YOUNG, M.D., C.M., Instructor in Pathology.

GEORGE K. BAER, M.D., Assistant in Pathology.

HARRY W. CARTER, M.D., Assistant in Pathology.

PATHOLOGY

- SHELDON COOPERMAN, M.D., Assistant in Pathology.
GEORGE R. DICKERSIN, M.D., Assistant in Pathology.
JOSEPH E. FREYDINGER, M.D., Assistant in Pathology.
ROBERT S. HARPER, M.D., Assistant in Pathology.
CARL A. HARRIS, PH.D., M.D., Assistant in Pathology.
MAURICE M. HELPERN, M.D., Assistant in Pathology.
GEORGE F. KWASS, M.D., Assistant in Pathology.
ROBERT L. MCAULEY, M.D., Assistant in Pathology.
ADRIENNE E. ROGERS, M.D., Assistant in Pathology.
MAIR A. BARLTROP, M.B., B.S., Research Fellow in Pathology.
BRUCE E. BELSHAW, D.V.M., Research Fellow in Pathology.
ALCIUN D. BENNETT, M.B., CH.B., Research Fellow in Pathology.
GEORGE T. DIAMANDOPOULOS, M.D., Research Fellow in Pathology.
EDWARD O. FOX, M.D., Research Fellow in Pathology.
CHARLEY E. GILMORE, D.V.M., Research Fellow in Pathology.
RONALD D. HUNT, D.V.M., Research Fellow in Pathology (from September 1, 1963).
ROBERT M. LEWIS, D.V.M., Research Fellow in Pathology.
CEDRIC A. MIMS, M.B., B.S., Research Fellow in Pathology (appointment expired February 29, 1964).
GABRIEL ORTEGA, M.D., Research Fellow in Pathology.
WESLEY P. PETERSON, M.D., Research Fellow in Pathology (from October 1, 1963).
POLIUS A. RASLAVICIUS, M.D., Research Fellow in Pathology.
JOSE R. SOLIS, M.D., Research Fellow in Pathology.
ELSI R. SUTER, M.D., Research Fellow in Pathology.
TIEN-WEN TAO, PH.D., Research Fellow in Pathology.
NAKAZO WATARI, M.D., Research Fellow in Pathology (from January 1, 1964).
EDWARD D. WILLIAMS, M.B., CH.B., Research Fellow in Pathology (appointment expired October 31, 1963).
MARCIA AIRES, M.B., CH.B., Teaching Fellow in Pathology.
PATRICIA ALONSO, M.D., Teaching Fellow in Pathology.
CECILIA V. BENNETT, M.D., Teaching Fellow in Pathology.

HARVARD MEDICAL SCHOOL

JOHN B. BLENNERHASSETT, M.B., CH.B., Teaching Fellow in Pathology.

WILLIAM D. BRADFORD, M.D., Teaching Fellow in Pathology
(from August 1, 1963).

GLENDA W. BRODKEY, M.D., Teaching Fellow in Pathology.

THOMAS M. CLENDENIN, M.D., Teaching Fellow in Pathology.

STANLEY COHEN, M.D., Teaching Fellow in Pathology.

HAROLD F. DVORAK, M.D., Teaching Fellow in Pathology.

HOSSEIN-DARIUSH FAHIMI, M.D., Teaching Fellow in Pathology.

DANIEL F. FOLEY, M.D., Teaching Fellow in Pathology.

JAMES M. GIBSON, M.D., Teaching Fellow in Pathology.

JONAS HALLGRIMSSON, M.D., Teaching Fellow in Pathology.

ELIZABETH T. HEDLEY-WHYTE, M.D., Teaching Fellow in Pathology.

CHARLES A. HORWITZ, M.D., Teaching Fellow in Pathology.

CHARLES S. KAHN, M.D., Teaching Fellow in Pathology.

RICHARD R. LINDQUIST, M.D., Teaching Fellow in Pathology.

HARRY L. MCCOMBS, M.D., Teaching Fellow in Pathology.

PEN-MING L. MING, M.D., Teaching Fellow in Pathology.

PIER F. PACI, M.D., Teaching Fellow in Pathology.

LIVIA H. REV-KURY, M.D., Teaching Fellow in Pathology.

GORDON B. ROBBINS, M.D., Teaching Fellow in Pathology.

RICHARD W. SAGEBIEL, M.D., Teaching Fellow in Pathology.

MASANORI SHIRAKI, M.D., Teaching Fellow in Pathology.

LAWRENCE C. SYLVIA, M.D., Teaching Fellow in Pathology.

HUBERT J. WOLFE, M.D., Teaching Fellow in Pathology.

Affiliated:

DAVID G. COGAN, M.D., Henry Willard Williams Professor of Ophthalmology, and Director of the Howe Laboratory of Ophthalmology.

JOHN C. SNYDER, M.D., Professor of Public Health Bacteriology, and Dean of the School of Public Health.

PAUL GOLDHABER, D.D.S., Associate Professor of Periodontology, and Tutor in Dental Science.

PATHOLOGY

EDWARD H. KASS, M.D., PH.D., Associate Professor of Bacteriology and Immunology.

STEPHEN B. ANDRUS, M.D., Assistant Professor of Pathology in the Department of Nutrition, S.P.H.

CAROLYN COHEN, PH.D., Research Associate in Biological Chemistry.

SHOU-CHENG J. FU, PH.D., Research Associate in Biological Chemistry.

MERVYN ISRAEL, PH.D., Research Associate in Biological Chemistry.

LEWIS T. MANN, JR., Research Associate in Biological Chemistry.

Required Course

PATHOLOGY A. *Second Year.* — The second year course in pathology is planned as a systematic survey of pathology. It consists of lectures, laboratory study of pathologic histology and demonstrations of gross pathologic material, partly from fixed specimens drawn from the Warren Museum, but more extensively from demonstrations of fresh autopsy and surgical material brought from the laboratories of the affiliated hospitals. Students visit the Pathology Laboratories of the Boston City Hospital, Massachusetts General Hospital, Peter Bent Brigham Hospital, Children's Hospital, Beth Israel Hospital, the Free Hospital for Women, the New England Deaconess Hospital, Boston Lying-in Hospital, and the South Huntington Avenue Veterans Hospital, for participation in performance of autopsies.

Lectures are given three days in the week by the staff. The course is divided roughly, though not sharply, into general and special pathology, covering in the first part of the year basic pathologic processes, such as tissue injury and repair, inflammation, tissue responses to specific infectious agents and neoplasia. Owing to the revision of the second year curriculum, special pathology is now integrated with the other second year courses and designated as "Pathologic Physiology." Seven organs or systems will be thus considered during the present academic year: hematopoietic system, kidney, cardiovascular system, respiratory system, gastrointestinal system, endocrine system, and nervous system. The pathology of the eye, oral cavity and vitamin deficiencies are covered in collaboration with other departments of the University.

HARVARD MEDICAL SCHOOL

Courses in parasitology and neuropathology are given separately by the Department of Tropical Public Health of the Harvard School of Public Health and the Departments of Neurology and Psychiatry, respectively.

SECOND YEAR	HOURS
Lectures. Dr. HERTIG and ASSOCIATES.	
Laboratory work. Dr. HERTIG and ASSOCIATES.	331

Fourth Year Elective Courses

1. Advanced Pathology. Dr. CASTLEMAN. M.G.H. Whole course, all day.
2. Advanced Pathology. Dr. G. K. MALLORY, B.C.H. Whole course, all day.
3. Advanced Pathology. Dr. DAMMIN, P.B.B.H. Whole course, all day.
4. The Pathology of the Endocrine Diseases. Dr. S. WARREN. N.E.D.H. Whole course, all day.
5. The Pathology of Tumors. Dr. S. WARREN. N.E.D.H. Whole course, all day.
6. Advanced Pathology. Dr. FARBER. C.H. Whole course, all day.
7. Advanced Pathology. Dr. FREIMAN. B.I.H. Whole course, all day.
8. The Pathology of Obstetrics. Dr. J. M. CRAIG. B.L.I.H. Whole course, all day.
9. The Pathology of Gynecology. Dr. J. M. Craig. F.H.W. Whole course, all day.

DIVISION OF FORENSIC PATHOLOGY — DEPARTMENT OF LEGAL MEDICINE

SHIELDS WARREN, M.D., D.Sc. (hon.), Professor of Pathology at the New England Deaconess Hospital, and Head of the Division of Forensic Pathology — Department of Legal Medicine.

RICHARD FORD, M.D., Associate Clinical Professor of Legal Medicine.

PATHOLOGY

- GEORGE W. CURTIS, M.D., Clinical Associate in Pathology.
MICHAEL A. LUONGO, M.D., Clinical Associate in Legal Medicine
(resigned August 15, 1963).
WILLIAM J. CURRAN, LL.M., Lecturer on Law in the Department
of Legal Medicine.
GEORGE G. KATSAS, M.D., Lecturer on Legal Medicine.
EDWIN V. HILL, M.D., Assistant in Legal Medicine.
ARTHUR J. MCBAY, PH.D., Assistant in Legal Medicine (resigned
August 15, 1963).
FRANK C. STRATTON, S.B., Assistant in Legal Medicine (died January
1, 1964).
LOLA M. WALKER, M.A., Assistant in Legal Medicine.
ANGEL S. DESIRELLO, M.D., Research Fellow in Legal Medicine.
JOHN M. FONG, M.D., Research Fellow in Legal Medicine (from
October 1, 1963).
MANUEL A. VILLAVARDE, M.D., Research Fellow in Legal Medicine.
-

Affiliated:

- JACK R. EWALT, M.D., A.M. (hon.), Bullard Professor of Psychiatry.

Required Course

Third Year.—Twelve lectures. The circumstances in which medical evidence is essential to the administration of justice. Mechanisms and pathological characteristics of injuries most frequently responsible for litigation. Laws and legal principles relating to the practice of medicine and to the physician-patient relationship.

THIRD YEAR	HOURS
Lectures. Dr. FORD and ASSOCIATES. H.M.S. Twelve Fridays of the first half-year, at 4.15 P.M.	13

HARVARD MEDICAL SCHOOL

DEPARTMENT OF PEDIATRICS

CHARLES A. JANEWAY, M.D., A.M. (hon.), Thomas Morgan Rotch Professor of Pediatrics, and Head of the Department at The Children's Hospital.

NATHAN B. TALBOT, M.D., Professor of Pediatrics, and Head of the Department at the Massachusetts General Hospital.

LOUIS K. DIAMOND, M.D., Professor of Pediatrics at the Children's Hospital.

CLEMENT A. SMITH, M.D., A.M. (hon.), Professor of Pediatrics at the Boston Lying-in Hospital, and Chairman of the Executive Committee of the Departments of Pediatrics.

WILLIAM BERENBERG, M.D., Associate Clinical Professor of Pediatrics (from January 1, 1964).

STEWART H. CLIFFORD, M.D., Associate Clinical Professor of Pediatrics.

THOMAS E. CONE, JR., M.D., Associate Clinical Professor of Pediatrics.

CHARLES D. COOK, M.D., Associate Clinical Professor of Pediatrics and Tutor in Medical Science.

JOHN D. CRAWFORD, M.D., Associate Professor of Pediatrics at the Massachusetts General Hospital and Tutor in Medical Science.

ALEXANDER S. NADAS, M.D., Associate Clinical Professor of Pediatrics.

HARRY SHWACHMAN, M.D., Associate Clinical Professor of Pediatrics.

WILLIAM BERENBERG, M.D., Assistant Clinical Professor of Pediatrics (through December 31, 1963).

JOHN F. CRIGLER, JR., M.D., Assistant Professor of Pediatrics.

FRANCIS X. FELLERS, M.D., Assistant Professor of Pediatrics at the Children's Hospital.

PARK S. GERALD, M.D., Assistant Professor of Pediatrics at the Children's Hospital.

PEDIATRICS

- ROBERT J. HAGGERTY, M.D., Assistant Professor of Pediatrics.
- SAMUEL L. KATZ, M.D., Assistant Professor of Pediatrics at The Children's Hospital.
- RALPH A. ROSS, M.D., Assistant Clinical Professor of Pediatrics.
- JAMES R. GALLAGHER, M.D., Lecturer on Pediatrics.
- BENEDICT F. MASSELL, M.D., Lecturer on Pediatrics.
- DEWITT C. BALDWIN, JR., M.D., Associate in Pediatrics at the Forsyth Dental Infirmary for Children.
- ROBERT B. BERG, M.D., Associate in Pediatrics at the Beth Israel Hospital.
- LEO B. BURGIN, M.D., Clinical Associate in Pediatrics.
- JAMES E. DRORBAUGH, M.D., Clinical Associate in Pediatrics.
- HELEN H. GLASER, M.D., Clinical Associate in Pediatrics (from October 1, 1963).
- NORMAN I. GOLD, PH.D., Associate in Biological Chemistry in the Department of Pediatrics at The Children's Hospital.
- JEROME A. GRUNT, PH.D., M.D., Associate in Pediatrics at The Children's Hospital.
- ANNA J. HAUCK, M.D., Clinical Associate in Pediatrics.
- PAUL G. HUGENHOLTZ, M.D., Clinical Associate in Pediatrics.
- ROBERT P. MASLAND, JR., M.D., Clinical Associate in Pediatrics.
- ROBERT G. MONROE, M.D., Associate in Pediatrics at The Children's Hospital.
- HARRY L. MUELLER, M.D., Clinical Associate in Pediatrics.
- FRED S. ROSEN, M.D., Associate in Pediatrics at The Children's Hospital (from January 1, 1964).
- DOROTHY B. VILLEE, M.D., Associate in Pediatrics.
- WILLIAM D. WINTER, JR., M.D., Clinical Associate in Pediatrics.
- SYDNEY S. GELLIS, M.D., Lecturer on Pediatrics.
- SIDNEY KIBRICK, PH.D., M.D., Lecturer on Pediatrics.
- KRISTBJÖRN TRYGGVASON, M.D., Visiting Lecturer on Pediatrics (October 1 through October 31, 1963).
- LOUIS WEINSTEIN, PH.D., M.D., Lecturer on Infectious Diseases.
- PATRICIA CHARACHE, M.D., Research Associate in Pediatrics.
- ALLEN C. CROCKER, M.D., Research Associate in Pediatrics.
- MARY L. S. EFRON, M.D., Research Associate in Pediatrics.

HARVARD MEDICAL SCHOOL

WERNER JACOBSON, M.D., PH.D., Research Associate in Pediatrics
(appointment expired December 31, 1963).

MIRIAM D. MANNING, M.D., Research Associate in Pediatrics.

DONALD H. MCGLODY, PH.D., Research Associate in Pediatrics.

JACOB G. MICHAEL, PH.D., Research Associate in Bacteriology
and Immunology in the Department of Pediatrics.

MARVIN SNIDER, PH.D., Research Associate in Psychology in the
Department of Pediatrics.

HERBERT S. STRAUSS, M.D., Research Associate in Pediatrics.

EDITH M. TAYLOR, PH.D., Research Associate in Pediatrics.

DONALD M. ALLEN, M.D., Instructor in Pediatrics (appointment
expired September 15, 1963).

OLGA E. ALLERS, M.D., Instructor in Pediatrics.

JOEL J. ALPERT, M.D., Instructor in Pediatrics.

THOMAS B. BRAZELTON, M.D., Instructor in Pediatrics.

JOHN K. BRINES, M.D., Instructor in Pediatrics.

JAMES J. A. CAVANAUGH, M.D., Instructor in Pediatrics.

WILLIAM D. COCHRAN, M.D., Instructor in Pediatrics.

ALBERT COHEN, M.D., Instructor in Pediatrics.

JOHN P. CONNELLY, M.D., Instructor in Pediatrics.

KAREL J. DE HAAS, M.D., Instructor in Pediatrics.

WILLIAM A. DICKSON, M.D., Instructor in Pediatrics.

WILLIAM R. DORSEY, M.D., C.M., Instructor in Pediatrics.

EDWARD C. DYER, M.D., Instructor in Pediatrics.

LEROY L. ELDREDGE, JR., M.D., Instructor in Pediatrics.

LAWRENCE J. ESSEMBER, M.D., Instructor in Pediatrics.

ALBERT A. FRANK, M.D., Instructor in Pediatrics.

ROBERT N. GANZ, M.D., Instructor in Pediatrics.

SPRAGUE W. HAZARD, M.D., Instructor in Pediatrics.

JOHN P. HUBBELL, JR., M.D., Instructor in Pediatrics.

RICHARD B. KEARSLEY, M.D., Instructor in Pediatrics.

SHERWIN V. KEVY, M.D., Instructor in Pediatrics.

KON T. KHAW, M.D., M.P.H., Instructor in Pediatrics.

JAY M. LEVY, M.D., Instructor in Pediatrics (from November 1,
1963).

ALEXANDER S. MACDONALD, JR., M.D., Instructor in Pediatrics.

PEDIATRICS

- FRANCIS C. McDONALD, M.D., Instructor in Pediatrics.
JOSEPH J. MCGOVERN, M.D., Instructor in Pediatrics.
ANNA T. MITUS, M.D., Instructor in Pediatrics.
ROBERT T. MOULTON, M.D., Instructor in Pediatrics (died November 21, 1963).
OTTO S. NAU, JR., M.D., Instructor in Pediatrics.
CHARLOTTE G. NEUMANN, M.D., Instructor in Pediatrics.
JULIAN L. PEARLMAN, M.D., Instructor in Pediatrics.
THOMAS C. PEEBLES, M.D., Instructor in Pediatrics.
WILLIAM PFEFFER, JR., M.D., Instructor in Pediatrics.
DANIEL R. RECTANUS, M.D., Instructor in Pediatrics.
GERTRUD C. REYERSBACH, M.D., Instructor in Pediatrics.
ROBERT H. RICHIE, JR., M.D., Instructor in Pediatrics.
JOHN S. ROBEY, M.D., Instructor in Pediatrics.
HEDWIG E. ROSE, M.B., CH.B., Instructor in Pediatrics (from September 1, 1963).
FRED S. ROSEN, M.D., Instructor in Pediatrics (through December 31, 1963).
JORDAN S. RUBOY, M.D., Instructor in Pediatrics.
ROBERT T. SCEERY, M.D., Instructor in Pediatrics.
EDWARD M. SEARS, M.D., Instructor in Pediatrics.
GERALD B. SHATTUCK, M.D., Instructor in Pediatrics.
S. NORMAN SHERRY, M.D., Instructor in Pediatrics.
LONDON SNEDEKER, M.D., M.P.H., Instructor in Pediatrics.
RUDOLF TOCH, M.D., Instructor in Pediatrics.
WILLIAM J. TURTLE, M.D., Instructor in Pediatrics.
JOHN W. G. TUTHILL, M.D., Instructor in Pediatrics.
WILHELMINA VAN DYKE, M.D., Instructor in Pediatrics.
JACOB WALLACE, M.D., Instructor in Pediatrics.
ELEONORE C. ZAUDY, M.D., Instructor in Pediatrics.
ALLA G. ZAVAR, M.B., B.S., Instructor in Pediatrics.
THOMAS W. ADAMS, M.D., Assistant in Pediatrics.
WILLIAM J. ADELSON, M.D., Assistant in Pediatrics.
DONALD J. ANNINO, M.D., Assistant in Pediatrics.
IRVING W. BAILIT, M.D., Assistant in Pediatrics.
EUAN T. BLANCH, M.D., Assistant in Pediatrics.

HARVARD MEDICAL SCHOOL

KELLEY K. DAVIS, M.D., Assistant in Pediatrics.
THOMAS F. DOLAN, M.D., Assistant in Pediatrics.
NATHAN H. FEARER, M.D., Assistant in Pediatrics.
STEPHEN M. FRAWLEY, M.D., Assistant in Pediatrics.
GEORGE A. GLINES, M.D., Assistant in Pediatrics.
ELIZABETH A. GREGORY, M.D., Assistant in Pediatrics.
ANDREW D. GUTHRIE, JR., M.D., Assistant in Pediatrics.
HERBERT A. HAESSLER, M.D., Assistant in Pediatrics.
JOHN B. JOSEPH, M.P.H., M.D., Assistant in Pediatrics.
ELLEN S.S.S. KANG, M.D., Assistant in Pediatrics.
HOWARD S. KING, M.D., Assistant in Pediatrics.
LEON E. KRUGER, M.D., Assistant in Pediatrics.
JANE C. MACLEOD, M.D., Assistant in Pediatrics.
DUNCAN H. MACNAMEE, M.D., Assistant in Pediatrics.
MYRON MORRIS, PH.D., M.D., Assistant in Pediatrics.
LAWRENCE S. MORSE, M.D., Assistant in Pediatrics.
DONALD M. MUIRHEAD, JR., M.D., Assistant in Pediatrics.
ALICE C. NAUEN, M.D., Assistant in Pediatrics.
ROBERT J. ORME, M.D., Assistant in Pediatrics.
JOSEPH OSBORNE, M.D., Assistant in Pediatrics.
HOWARD J. POTTER, M.D., Assistant in Pediatrics.
OLIVER F. RODDEY, M.D., Assistant in Pediatrics.
MURRAY K. ROSENTHAL, M.D., Assistant in Pediatrics.
HERBERT L. RUBEN, M.D., Assistant in Pediatrics.
KRISHNA M. SAXENA, M.D., Assistant in Pediatrics.
GEORGE L. SIEGEL, A.B., Assistant in Pediatrics.
LESLIE SILVERSTONE, M.D., D.P.H., Assistant in Pediatrics.
ALLAN B. STIMSON, M.D., Assistant in Pediatrics (from December
1, 1963).
HARRY B. STULTS, JR., M.D., Assistant in Pediatrics.
GEORGE H. TAFT, M.D., Assistant in Pediatrics.
JOHN TAUB, M.D., Assistant in Pediatrics.
RICHARD H. WATSON, M.D., Assistant in Pediatrics.
HAROLD J. WHEELER, M.D., Assistant in Pediatrics.
MARTIN K. WHITE, M.D., Assistant in Pediatrics.
THOMAS J. WHITFIELD, 3RD., M.D., Assistant in Pediatrics.

PEDIATRICS

ALAN ZISKIND, M.D., Assistant in Pediatrics.

ISRAEL F. ABROMS, M.B., Ch.B., Research Fellow in Pediatrics (appointment expired March 31, 1964).

MIRNA I. AESCHLIMANN, M.D., Research Fellow in Pediatrics (from September 1, 1963).

SERGIO R. AGUILAR, M.D., Research Fellow in Pediatrics.

FRANCISCO J. AMEZCUA, M.D., Research Fellow in Pediatrics.

JACQUELINE T. AMEZCUA, M.D., Research Fellow in Pediatrics.

CARLOS BELTRAN-PAZ, M.D., Research Fellow in Pediatrics.

NIHAT BILGINTURAN, M.D., Research Fellow in Pediatrics.

GERALD E. BLOOM, M.D., Research Fellow in Pediatrics.

ROBERT W. BOSTON, M.D., Research Fellow in Pediatrics.

LYNN P. CARMICHAEL, M.D., Research Fellow in Pediatrics.

MARTHA A. CARPENTER, M.D., Research Fellow in Pediatrics.

JENNIFER D. CARTRIGHT, M.B., Research Fellow in Pediatrics (appointment expired December 31, 1963).

GEORGE E. CASSADY, 2ND., M.D., Research Fellow in Pediatrics.

EVAN CHARNEY, M.D., Research Fellow in Pediatrics.

GEORGE P. CONTIS, M.D., Research Fellow in Pediatrics.

RUSSELL D. CUNNINGHAM, M.D., Research Fellow in Pediatrics.

JUTTA E. DUGGE, M.D., Research Fellow in Pediatrics.

GIUSEPPE ERBA, M.D., Research Fellow in Pediatrics.

PHILIP FIREMAN, M.D., Research Fellow in Pediatrics (resigned November 24, 1963).

THEODORE FRIEDMANN, M.D., Research Fellow in Pediatrics (from September 1, 1963).

WALTER J. GAMBLE, M.D., Research Fellow in Pediatrics.

RAUL GAMBOA, M.D., Research Fellow in Pediatrics.

RAMON S. GARCIA, M.D., Research Fellow in Pediatrics.

FLORENCE GELLER, M.D., Research Fellow in Pediatrics.

WELTON M. GERSONY, M.D., Research Fellow in Pediatrics.

ALLAN GOLDBLATT, M.D., Research Fellow in Pediatrics.

SAMUEL P. GOTOFF, M.D., Research Fellow in Pediatrics.

ALTAN GUNALP, M.D., Research Fellow in Pediatrics (appointment expired December 31, 1963).

CHRISTIAN HERRERA, M.D., Research Fellow in Pediatrics.

HARVARD MEDICAL SCHOOL

- DARCY W. O. HUGHES, M.B., B.S., Research Fellow in Pediatrics.
JOSEPH L. KENNEDY, JR., M.D., Research Fellow in Pediatrics.
MARTIN R. KLEMPERER, M.D., Research Fellow in Pediatrics (appointment terminated November 30, 1963).
CHRISTOPHER G. C. LAFARGE, M.D., Research Fellow in Pediatrics.
DAVID J LANG, M.D., Research Fellow in Pediatrics.
MARGARET S. MACGILLIVRAY, M.D., Research Fellow in Pediatrics.
ERIN M. MEHTA, M.B., B.S., Research Fellow in Pediatrics.
PIERRE R. MELICE, M.D., Research Fellow in Pediatrics (from September 15, 1963).
ETSURO MOTOYAMA, M.D., Research Fellow in Pediatrics.
KIARASH NAFICY, M.D., Research Fellow in Pediatrics (appointment expired August 31, 1963).
BEALE H. ONG, M.D., Research Fellow in Pediatrics (appointment expired September 15, 1963).
MARCELLO ORZALESI, M.D., Research Fellow in Pediatrics (appointment expired January 31, 1964).
FRANK A. OSKI, M.D., Research Fellow in Pediatrics (appointment expired August 31, 1963).
SALVATORE PELARGONIO, M.D., Research Fellow in Pediatrics (appointment expired September 30, 1963).
BERRY I. PLESS, M.D., Research Fellow in Pediatrics.
ALBERTO PRADILLA, M.D., Research Fellow in Pediatrics (appointment expired August 31, 1963).
EDWARD O. R. REYNOLDS, M.B., B.S., Research Fellow in Pediatrics.
MARY SANTORINEOU, EQUIV. of M.D., Research Fellow in Pediatrics.
JACK SINGER, M.D., Research Fellow in Pediatrics.
DENNIS SLONE, M.B., CH.B., Research Fellow in Pediatrics.
LESTER F. SOYKA, M.D., Research Fellow in Pediatrics.
RAJENDRA TANDON, M.D., Research Fellow in Pediatrics (appointment expired August 31, 1963).
OTTO G. THILENIUS, M.D., PH.D., Research Fellow in Pediatrics.

PEDIATRICS

SIMONETTE L. TOSI, Ph.D., M.D., Research Fellow in Pediatrics
(from September 1, 1963).

REGINALD R. W. TOWNLEY, M.B., B.S., Research Fellow in Pediatrics.

IRVING UMANSKY, M.D., Research Fellow in Pediatrics.

ALFRED WEIL, M.D., Research Fellow in Pediatrics (from October 1, 1963).

DANIEL H. WISEMAN, M.D., Research Fellow in Pediatrics (from September 1, 1963).

JUNICHI YASUDA, M.D., Research Fellow in Pediatrics (appointment expired August 31, 1963).

MARK D. ATKIN, M.D., Teaching Fellow in Pediatrics (from January 1, 1964).

THEODORE W. AVRUSKIN, M.D., Teaching Fellow in Pediatrics.

DONALD BARLTROP, M.B., B.S., Teaching Fellow in Pediatrics.

ROSEMARY C. DOBSON, M.D., Teaching Fellow in Pediatrics.

CHRISTOPHER R. ELIOT, M.D., Teaching Fellow in Pediatrics (appointment terminated October 31, 1963).

EDWARD S. EMERY, 3RD., M.D., Teaching Fellow in Pediatrics.

GERALD E. GAULL, M.D., Teaching Fellow in Pediatrics.

JOHN L. GREEN, M.D., Teaching Fellow in Pediatrics.

GERALD W. HAZARD, M.D., Teaching Fellow in Pediatrics.

GUIDO HERZ, M.D., Teaching Fellow in Pediatrics.

JAMES R. HUGHES, M.D., Teaching Fellow in Pediatrics.

RICHARD A. KATZ, M.D., Teaching Fellow in Pediatrics (appointment expired September 30, 1963).

MAURICE E. KEENAN, M.D., Teaching Fellow in Pediatrics (appointment terminated November 30, 1963).

TILLINGHAST G. LYBASS, M.D., Teaching Fellow in Pediatrics.

EILEEN M. QUELLETTE, M.D., Teaching Fellow in Pediatrics.

ROBERT J. WARREN, M.D., Teaching Fellow in Pediatrics (appointment expired December 31, 1963).

MICHAEL A. ZWERDLING, M.D., Teaching Fellow in Pediatrics.

Affiliated:

RAYMOND D. ADAMS, M.D., Bullard Professor of Neuropathology.

HARVARD MEDICAL SCHOOL

SIDNEY FARBER, M.D., Professor of Pathology at The Children's Hospital.

GEORGE E. GARDNER, M.D., Clinical Professor of Psychiatry.

EDWARD B. D. NEUHAUSER, M.D., Clinical Professor of Radiology.

WILLIAM M. SCHMIDT, M.D., Professor of Maternal and Child Health, S.P.H.

THOMAS H. WELLER, M.D., Richard Pearson Strong Professor of Tropical Public Health, S.P.H.

PHILIP R. DODGE, M.D., Assistant Professor of Neurology at the Massachusetts General Hospital.

ARTHUR J. LINENTHAL, M.D., Assistant Clinical Professor of Medicine.

JANET W. McARTHUR, M.D., Assistant Clinical Professor of Medicine.

MORTON N. SWARTZ, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

ALLAN L. FRIEDLICH, M.D., Clinical Associate in Medicine.

PETER H. WOLFF, M.D., Associate in Psychiatry at The Children's Hospital.

FRANK ALBERT HOWARD, M.D., Research Associate in Pharmacology, and Tutor in Medical Science.

TULLY BENARON, M.D., Instructor in Psychiatry.

RICHARD GALDSTON, M.D., Instructor in Psychiatry.

JOHN H. LAMONT, M.D., Instructor in Psychiatry.

MARY L. L. SCHOLL, M.D., Instructor in Neurology.

DEXTER M. BULLARD, JR., M.D., Assistant in Psychiatry.

JOHN JOSEPH DRISCOLL, M.D., Assistant in Obstetrics and Gynecology.

Required Courses

PEDIATRICS A. *Second Year.*—A few lectures are given during the second year to familiarize the students with the study of children before they come into contact with patients. In this series are discussed the physiological readjustments of neonatal life, the care of the well child, and the history and physical examination of the sick child.

PEDIATRICS

PEDIATRICS B. *Third Year.* — Eleven lectures are given in which the character of pediatrics is described and certain of its outstanding features are defined.

Section teaching: Each section, during its assignment to The Children's Hospital Medical Center for thirty-two days, receives instruction in pediatrics, as well as in the surgery, and orthopaedic surgery of childhood. Each group of three students is assigned to the medical out-patient department and wards for fifteen periods of three hours each, where under the supervision of their instructor they receive actual experience in history taking, physical examination and the care of infants and children. Conferences and clinics on important aspects of pediatrics form part of the course. One half day per week is devoted to demonstrations and practice in the care of the normal infant and child and other exercises are devoted to pathological conferences and special clinics.

PEDIATRICS C. *Fourth Year.* — The fourth year work consists of a month of instruction, either at the Children's Service of the Massachusetts General Hospital or at The Children's Hospital Medical Center. The students act as clinical clerks on the wards and receive instruction in infectious diseases at the New England Center Hospital once a week. Instruction in pediatrics of the newborn infant is given during the fourth year work in obstetrics at the Boston Lying-in Hospital.

SECOND YEAR

HOURS

Clinical lectures. C.H.M.C. Second half year	4
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THIRD YEAR

Clinical lectures. C.H.M.C. First half year	11
Section teaching. C.H.M.C. Throughout the year.	63

FOURTH YEAR

C1. Clinical Clerkship. Dr. JANEWAY and ASSOCIATES. C.H.M.C. 144
C2. Clinical Clerkship. Dr. TALBOT and ASSOCIATES. M.G.H. 144
Neonatal Pediatrics, Drs. SMITH, CLIFFORD, and ASSOCIATES, is included in Fourth Year Obstetrics and Gynecology.

HARVARD MEDICAL SCHOOL

Fourth Year Elective Courses

3. Advanced Pediatrics. Drs. JANEWAY, DIAMOND, SMITH, and ASSOCIATES. C.H.M.C. and B.L.I.H. Whole course, all day. Opportunities are offered in Child Health, General Pediatrics, Neoplastic Diseases, Metabolic Disease, Endocrinology, Adolescent Medicine, Neonatal Pediatrics, Neurology, Hematology, and Cardiology.
4. Advanced Pediatrics. Drs. TALBOT, CRAWFORD, and ASSOCIATES. M.G.H. Whole course, all day. Opportunities are offered in General Pediatrics, Endocrinology, Metabolic Disease, Child Behavior, and Neurology.
5. Child Psychiatry. Dr. LAMONT and ASSOCIATES. M.G.H. Whole course, all day (same course as Psychiatry 8).
6. Child Psychiatry. Dr. GARDNER and ASSOCIATES. C.H.M.C. Judge Baker. Whole course, all day (same course as Psychiatry 10).
7. Infectious Diseases. Dr. WEINSTEIN. N.E.C.H. Whole course, all day.

Voluntary Course

31. Family Medicine. Drs. HAGGERTY, SIDEL, FUNKHAUSER, DRISCOLL, ROBBINS, BULLARD, and WOLFF. Tuesday and Thursday afternoons throughout the year. Limited to thirty-two third year students. (Same course as Medicine 46).

PHARMACOLOGY

DEPARTMENT OF PHARMACOLOGY

- OTTO KRAYER, M.D., A.M. (hon.), M.D. (hon.), Charles Wilder Professor of Pharmacology, and Head of the Department (on sabbatical leave November 1, 1963 through April 30, 1964).
- STEPHEN W. KUFFLER, M.D., A.M. (hon.), Professor of Neurophysiology and Neuropharmacology.
- PAUL L. MUNSON, Ph.D., A.M. (hon.), Professor of Pharmacology in the School of Dental Medicine.
- DAVID H. HUBEL, M.D., A.M. (hon.), Associate Professor of Neurophysiology and Neuropharmacology.
- ULLRICH G. TRENDLENBURG, M.D., Ph.D., A.M. (hon.), Associate Professor of Pharmacology.
- WERNER E. FLACKE, M.D., Assistant Professor of Pharmacology.
- EDWIN J. FURSHPAN, Ph.D., Assistant Professor of Neurophysiology and Neuropharmacology.
- OLEG JARDETZKY, M.D., Ph.D., Assistant Professor of Pharmacology.
- MARTIN LUBIN, M.D., Ph.D., Assistant Professor of Pharmacology.
- JEAN M. MARSHALL, Ph.D., Assistant Professor of Pharmacology.
- DAVID D. POTTER, Ph.D., Assistant Professor of Neurophysiology and Neuropharmacology.
- FREDERICK C. UHLE, Ph.D., Assistant Professor of Chemistry in the Department of Pharmacology.
- NORMAN WEINER, M.D., Assistant Professor of Pharmacology.
- TORSTEN N. WIESEL, M.D., Assistant Professor of Neurophysiology and Neuropharmacology.
- JOHN R. BLINKS, M.D., Associate in Pharmacology.
- WALTER R. BURACK, M.D., Associate in Pharmacology.
- PHILIP F. HIRSCH, Ph.D., Associate in Pharmacology in the School of Dental Medicine.
- ROGER T. KELLEHER, Ph.D., Associate in Psychology in the Department of Pharmacology.

HARVARD MEDICAL SCHOOL

- JAN KOCH-WESER, M.D., Associate in Pharmacology and Tutor in Medical Science.
- EDWARD A. KRAVITZ, PH.D., Associate in Neurophysiology and Neuropharmacology.
- WILLIAM H. MORSE, PH.D., Associate in Psychology in the Department of Pharmacology
- HUGUES J-P. RYSER, M.D., Associate in Pharmacology.
- DOUGLAS R. WAUD, M.D., Associate in Pharmacology.
- ROBERT B. BOSLER, Research Associate in Neurophysiology and Neuropharmacology.
- FRANK A. HOWARD, M.D., Research Associate in Pharmacology and Tutor in Medical Science.
- GORDON R. JULIAN, PH.D., Research Associate in Pharmacology.
- J. RICHARD CROUT, M.D., Instructor in Pharmacology (appointment expired August 31, 1963).
- PAUL R. DRASKOCZY, M.D., Instructor in Pharmacology.
- HERBERT L. ENNIS, PH.D., Instructor in Pharmacology.
- LINCOLN T. POTTER, M.D., Instructor in Pharmacology.
- CHRISTOPHER D. THRON, M.D., Instructor in Pharmacology.
- JAIME ALVAREZ, M.D., Research Fellow in Neurophysiology and Neuropharmacology.
- MARIA L. BADE, PH.D., Research Fellow in Pharmacology.
- JOSEPH L. BOROWITZ, PH.D., Research Fellow in Pharmacology.
- FRANCIS J. BULLOCK, PH.D., Research Fellow in Pharmacology.
- GORDON L. COPPOC, D.V.M., Research Fellow in Pharmacology.
- VLADISLAV EYBL, M.D., Research Fellow in Pharmacology (resigned November 30, 1963).
- DAVID H. KESSEL, PH.D., Research Fellow in Pharmacology (appointment expired July 31, 1963).
- SALOMON Z. LANGER, M.D., Research Fellow in Pharmacology (from September 1, 1963).
- GORDON K. MACLEOD, M.D., Research Fellow in Pharmacology.
- JOHN G. NICHOLLS, PH.D., M.B., B.S., Research Fellow in Neurophysiology and Neuropharmacology.
- HANSJURG SCHAER, M.D., Research Fellow in Pharmacology.
- ERNST E. SEIFEN, M.D., Research Fellow in Pharmacology.

PHARMACOLOGY

TADASI TAMAI, M.D., Research Fellow in Pharmacology (from September 1, 1963).

JAMES J. FISCHER, M.D., Teaching Fellow in Pharmacology.

PRAMOD K. GUJRAL, M.B., B.S., Teaching Fellow in Pharmacology.

CHARLES O. RUTLEDGE, M.S., Teaching Fellow in Pharmacology.

Required Course

PHARMACOLOGY A. *Second Year.*—The course in Pharmacology consists of lectures, demonstrations, experimental laboratory exercises and conferences. Concepts of general importance in pharmacology and toxicology are presented and the opportunity is provided for students to become acquainted with important drugs. Emphasis is placed on those actions of pharmacological agents which help in understanding the disordered physiology of disease and which are of importance in the rational treatment of disease. The mode of action of important drugs is discussed. In the laboratory, the student is able to become acquainted at first hand with some of the experimental facts, obtained from studies on man and animals, which provide the starting points for the analysis of pharmacological effects.

SECOND YEAR

HOURS

Lectures. Dr. KRAYER and ASSOCIATES. One hour, three times a week: Tuesday, Thursday and Saturday mornings, first half year. Members of the staff of the Department of Pharmacology will continue the teaching of Pharmacology in collaboration with other departments in the integrated program of the second half year.

Laboratory work and conferences. Dr. KRAYER and ASSOCIATES. Tuesday mornings, first half year. Further exercises in Pharmacology will be conducted as part of the integrated program of the second half year.

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Fourth Year Elective Courses

20. Pharmacological Investigation on:

Cardiovascular system. Drs. KRAYER, FLACKE, and KOCH-WESER.
Endocrinology. Drs. MUNSON and HIRSCH.

HARVARD MEDICAL SCHOOL

Behavior. Drs. DEWS, MORSE, and KELLEHER.

Molecular biology. Dr. JARDETZKY.

Bacterial and mammalian cells. Drs. LUBIN and RYSER.

Autonomic nervous system. Dr. TRENDELENBURG.

Metabolism of tissue amines. Dr. WEINER.

Smooth muscle. Dr. MARSHALL.

Mechanisms of drug action. Dr. WAUD.

21. Structural and synthetic studies on steroid and indole alkaloids.
Dr. UHLE.

PHYSIOLOGY

DEPARTMENT OF PHYSIOLOGY

EUGENE M. LANDIS, M.D., PH.D., S.M. (hon.), A.M. (hon.), George Higginson Professor of Physiology, and Head of the Department.

A. CLIFFORD BARGER, M.D., Robert Henry Pfeiffer Professor of Physiology.

JOHN R. PAPPENHEIMER, PH.D., Career Investigator of the American Heart Association, and Visiting Professor of Physiology.

*ARTHUR K. SOLOMON, PH.D., D.PHIL., Associate Professor of Biophysics.

THOMAS H. WILSON, M.D., PH.D., A.M. (hon.), Associate Professor of Physiology.

PETER F. CURRAN, PH.D., Assistant Professor of Biophysics.

ELWOOD HENNEMAN, M.D., Assistant Professor of Physiology, and Ella Sachs Plotz Fellow in Physiology.

DONALD L. D. CASPAR, PH.D., Lecturer on Biophysics at The Children's Hospital.

RICHARD D. BERLIN, M.D., Associate in Physiology.

LEON GOLDSTEIN, PH.D., Associate in Physiology and Tutor in Physiology.

HENRY M. GOODMAN, PH.D., Associate in Physiology.

S. RICHARD HEISEY, S.D., Associate in Physiology.

ERNEST PAGE, M.D., Associate in Biophysics.

AHARON KATCHALSKY, PH.D., Visiting Lectura on Biophysics (from August 1, 1963).

VLADIMIR FENCL, M.D., Research Associate in Physiology.

ROBERT LANGRIDGE, PH.D., Research Associate in Biophysics.

BURNETT M. PITT, PH.D., Research Associate in Physiology (appointment expired October 31, 1963).

MYRON M. WEAVER, PH.D., M.D., Research Associate in Physiology (September 1 through November 30, 1963).

DENYS R. HELD, M.D., Instructor in Physiology (from September 1, 1963).

* Appointment under the Committee on Medical Research in Biophysics.

HARVARD MEDICAL SCHOOL

JAMES A. HERD, M.D., Instructor in Physiology.

VICTOR SIDEL, M.D., Instructor in Biophysics.

SERGE CARRIERE, M.D., Research Fellow in Physiology.

MARCELINO CERELJIDO, M.D., Research Fellow in Biophysics.

RAYMOND V. DAMADIAN, M.D., Research Fellow in Biophysics.

JULIUS J. DEREN, M.D., Research Fellow in Physiology.

GEORGE M. FANELLI, PH.D., Research Fellow in Physiology.

GEORGE W. KIDDER, 3RD., PH.D., Research Fellow in Biophysics.

HUGH H. KOPALD, M.D., Research Fellow in Physiology (appointment expired September 30, 1963).

DUNCAN W. MARTIN, PH.D., Research Fellow in Biophysics.

DAVID L. MAUDE, M.D., Research Fellow in Biophysics.

BRUCE POMERANZ, M.D., Research Fellow in Physiology.

JAMES M. SCHOOLER, JR., PH.D., Research Fellow in Physiology (from October 1, 1963).

WALTER N. SCOTT, M.D., Research Fellow in Biophysics.

ISAM H. SHEHADEH, M.D., Research Fellow in Biophysics.

GEORGE G. SOMJEN, M.D., Research Fellow in Physiology (appointment expired December 31, 1963).

HARVEY V. SPARKS, JR., M.D., Research Fellow in Physiology (from August 15, 1963).

MARIO H. ZARLENGO, M.D., Research Fellow in Biophysics.

HERBERT H. WINKLER, A.B., Teaching Fellow in Physiology (from September 1, 1963).

Affiliated:

JAMES T. IRVING, PH.D., M.D., Professor of Physiology at the Forsyth Dental Infirmary for Children.

JEAN MAYER, PH.D., D.Sc., Associate Professor of Nutrition, S.P.H.

Required Course

PHYSIOLOGY A. *First Year.* — During the first semester, as an introduction to physiology, lectures are designed to acquaint the student with the fundamental aspects of cardiovascular physiology and to consider in detail those portions of the subject that are essential to an

PHYSIOLOGY

understanding of the phenomena of health and disease in man. By means of laboratory exercises the student is introduced to the observational methods and techniques available for studying cardiovascular function in man. Then emphasis is placed upon exercises illustrating in animals the experimental procedures employed for the detailed analysis of function and for the acquisition of a fundamental knowledge of cardiovascular physiology. Conferences and demonstrations supplement the more formal instruction.

During the second semester the lectures and laboratory work in physiology are interwoven with those given by the Departments of Anatomy and Biological Chemistry. In the first five weeks selected topics in renal and pulmonary physiology are presented, with discussion of glomerular filtration, active transport, mechanics of breathing, gas transport and gas exchange in the lungs. The role of the kidneys and lungs in maintaining acid-base balance illustrates the interrelationships of the two systems.

Principles of gastrointestinal physiology and endocrinology are taught in the second five week period. The fate of ingested food stuffs is described including the secretion of enzymes, digestion in the gastrointestinal tract and absorption of these products of digestion. The functions of the liver are considered, with special emphasis on those related to the secretion of bile. The endocrine regulation of metabolism, growth and reproduction is presented, with laboratory work conducted in small groups. These exercises are designed to illustrate special techniques currently employed in endocrine research.

The third period, duration six weeks, is devoted to neurosciences, beginning with consideration of conduction, excitation and inhibition as physico-chemical events at nerve membranes. The motor systems are surveyed in ascending fashion, beginning with muscles and continuing through the spinal cord and brainstem to the cerebral cortex. Sensory systems are considered with special emphasis on vision. Higher level function, such as sleep and consciousness, are discussed in the final week.

FIRST YEAR

HOURS

Lectures and laboratory work. Drs. BARGER, CURRAN, GOLDSTEIN, GOODMAN, HEISEY, HENNEMAN, KINTER, LANDIS, PAPPENHEIMER, SOLOMON, and WILSON.

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HARVARD MEDICAL SCHOOL

Fourth Year Elective Courses

20. Physiological Investigation in:
Cardiovascular and renal function. Drs. BARGER, GOLDSTEIN, and LANDIS.
Gastro-intestinal Physiology. Dr. WILSON.
Neurophysiology. Dr. HENNEMAN and Dr. PAPPENHEIMER.
Endocrinology. Dr. GOODMAN.
21. Use of Isotopes in Biological Research. Dr. A. K. SOLOMON. Investigation not less than one full course. For admission consult Dr. SOLOMON directly. (Same course as Biological Chemistry 21).

PREVENTIVE MEDICINE

DEPARTMENT OF PREVENTIVE MEDICINE

DAVID D. RUTSTEIN, M.D., Professor of Preventive Medicine, and Head of the Department.

DAVID J. FINNEY, Sc.D., Visiting Professor of Biomathematics in the Department of Preventive Medicine (appointment expired July 31, 1963).

ROBERT J. GLASER, M.D., Professor of Social Medicine.

OSLER L. PETERSON, M.D., Visiting Professor of Preventive Medicine.

LEONARD W. CRONKHITE, JR., M.D., Lecturer on Preventive Medicine.

SIDNEY S. LEE, M.D., Lecturer on Preventive Medicine.

FRANCIS L. MUSSELLS, M.D., C.M., Lecturer on Preventive Medicine.

THEODORE COLTON, S.D., Associate in Preventive Medicine.

WILLIAM B. KANNEL, M.D., Clinical Associate in Preventive Medicine.

RALPH S. PAFFENBARGER, JR., M.D., DR.P.H., Clinical Associate in Preventive Medicine.

MURRAY EDEN, PH.D., Lecturer on Preventive Medicine.

ALEXANDER M. BURGESS, JR., M.D., Research Associate in Preventive Medicine.

JOHN M. NEWELL, S.D., Research Associate in Preventive Medicine.

RITA J. NICKERSON, M.A., Research Associate in Preventive Medicine.

WILLIAM P. CASTELLI, M.D., Research Fellow in Preventive Medicine.

GARY D. FRIEDMAN, M.D., Research Fellow in Preventive Medicine.

Affiliated:

ERNEST M. BARSAMIAN, M.D., Clinical Associate in Surgery.

LOUIS WEINSTEIN, PH.D., M.D., Lecturer on Infectious Diseases.

JANE WORCESTER, DR.P.H., Professor of Biostatistics, S.P.H.

HARVARD MEDICAL SCHOOL

DAVID C. POSKANZER, M.D., Research Associate in Epidemiology,
S.P.H.

The preventive aspects of medicine and its various specialties are taught in all departments of the Medical School, and arrangements are made for the integration of such teaching with the more formal teaching in the required course in preventive medicine. An effort is made to stress those aspects of preventive medicine which concern the practicing physician, rather than those which concern the public health officer.

Required Courses

QUANTITATIVE METHODS IN MEDICINE. *Second Year.*—Dr. COLTON, Dr. EDEN, and ASSOCIATES Twelve lectures and two laboratory seminar periods. An introduction to statistical reasoning in the evaluation of data is offered as part of the course entitled "Growth and Development." The statistical teaching includes a description of the types of data encountered in the medical literature, elementary probability theory, problems of sampling and the logical basis for drawing conclusions from evidence. Assistance in this teaching will be given by members of several of the departments in the School of Medicine and of the Department of Biostatistics in the School of Public Health.

Students with considerable background in mathematics and statistics will be considered for a special section of this course in which greater attention will be given to the application of mathematics to biological problems.

PREVENTIVE MEDICINE A. *Third Year.*—The course in preventive medicine consists of clinics, lectures and symposia. The preventive aspects of clinical medicine are correlated with information in the fields of epidemiology, biostatistics, social medicine, occupational medicine, medical economics and environmental sanitation.

PREVENTIVE MEDICINE C. *Fourth Year.*—A Health Resources Survey, evaluating community facilities for the total medical care of specified patients, is required of all students.

THIRD YEAR

HOURS

Clinics, symposia and lectures. Dr. RUTSTEIN, Dr. PETERSON, and ASSOCIATES, in cooperation with representatives of other departments.

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PREVENTIVE MEDICINE

FOURTH YEAR

Health Resources Survey and individual student conference. 50

Fourth Year Elective Courses

1. Advanced work in Preventive Medicine and Epidemiology. Dr. RUTSTEIN and ASSOCIATES. This includes opportunity for one month's work in the Division of Social Medicine, Montefiore Hospital, New York City.
2. Man-made Diseases. Dr. HARDY and ASSOCIATES. M.G.H. and M.I.T. Whole course, all day. Limited to one student a month.

Voluntary Course

1. Design of Clinical Investigation. Dr. RUTSTEIN and ASSOCIATES. Eight two hour seminars in March and April. Open to third and fourth year students. Limited to fifteen students.

HARVARD MEDICAL SCHOOL

DEPARTMENT OF RADIOLOGY

HENRY I. KOHN, PH.D., M.D., Alvan T. and Viola D. Fuller-American Cancer Society Professor of Radiology.

EDWARD B. D. NEUHAUSER, M.D., Clinical Professor of Radiology and Head of the Department.

LAURENCE L. ROBBINS, M.D., Clinical Professor of Radiology.

JAMES B. DEALY, JR., M.D., Associate Clinical Professor of Radiology.

MARTIN H. WITTENBORG, M.D., Associate Clinical Professor of Radiology.

RICHARD SCHATZKI, M.D., Assistant Clinical Professor of Radiology.

MILFORD D. SCHULZ, M.D., Assistant Clinical Professor of Radiology.

MORRIS SIMON, M.B., CH.B., Assistant Clinical Professor in Radiology.

EDWARD W. WEBSTER, PH.D., Assistant Professor of Physics in the Department of Radiology at the Massachusetts General Hospital.

STANLEY M. WYMAN, M.D., Assistant Clinical Professor of Radiology.

STANLEY J. ADELSTEIN, M.D., Philip H. Cook Fellow in Radiology, and Associate in Anatomy.

GIULO J. D'ANGIO, M.D., Clinical Associate in Radiology.

JACK R. DREYFUSS, M.D., Clinical Associate in Radiology.

JOHN E. GARY, M.D., Clinical Associate in Radiology.

JOSEPH H. MARKS, M.D., Clinical Associate in Radiology.

MAJIC S. POTSAID, M.D., Clinical Associate in Radiology.

CHIU-CHEN WANG, M.D., Clinical Associate in Radiology.

GEORGE B. C. HARRIS, M.D., Instructor in Radiology.

MIRLE A. KELLETT, M.D., Instructor in Radiology.

MARTIN B. LEVENE, M.D., Instructor in Radiology.

ALEXANDER S. MACMILLAN, JR., M.D., Instructor in Radiology.

RADIOLOGY

JAMES M. McNEILL, M.D., Instructor in Radiology.
PAUL F. J. NEW, M.B., B.S., Instructor in Radiology.
KEITH R. RABINOV, M.D., Instructor in Radiology.
JOHN L. SOSMAN, M.D., Instructor in Radiology.
FREDERICK S. TOMCHIK, M.D., Instructor in Radiology.
ALFRED L. WEBER, M.D., Instructor in Radiology.
JOHN F. BACON, M.D., Assistant in Radiology (resigned August 31, 1963).
BORIS P. BUSHUEFF, M.D., Assistant in Radiology.
JERRY R. CROTEAU, M.D., Assistant in Radiology.
ROBERT E. DINSMORE, M.D., Assistant in Radiology.
NATHAN T. GRISCOM, M.D., Assistant in Radiology.
LLOYD E. HAWES, M.D., Assistant in Radiology.
RICHARD G. O'BRIEN, M.D., Assistant in Radiology.
JOHN F. O'CONNOR, M.D., Assistant in Radiology.
HENRY P. PENDERGRASS, M.D., Assistant in Radiology.
JAMES A. ROURKE, M.D., Assistant in Radiology.
NORMAN L. SADOWSKY, M.D., Assistant in Radiology.
STEFAN C. SCHATZKI, M.D., Assistant in Radiology.
HUBERT S. SEAR, M.D., Assistant in Radiology.
JAMES B. SIMMONS, M.B., CH.B., Assistant in Radiology.
WILLIAM D. SUER, M.D., Assistant in Radiology.
MELVIN TEFFT, M.D., Assistant in Radiology (appointment expired September 30, 1963).
WALTHER T. WEYLMAN, M.D., Assistant in Radiology.
PHILIP S. RANE, M.D., Teaching Fellow in Radiology.

Required Courses

First Year.—Radiological instruction during the first year comprises a series of lectures, during the course in Anatomy, designed to introduce and apply the X-ray method as a means of studying gross internal anatomy in health and disease. The practical application of these methods is extended in the Saturday clinics.

Second Year.—During the second semester of the second year, small group exercises and laboratories are conducted in conjunction with the program of correlative teaching, with emphasis on the sys-

HARVARD MEDICAL SCHOOL

tematic approach to X-ray interpretation and the correlation of abnormal findings with gross pathology and patho-physiology.

Third Year. — In the third year the following instruction is offered: (a) four general lectures; an interdepartmental panel lecture on "Risk Versus Need and the Safe Conduct of Radiological Procedures", one on the Effects of Ionizing Radiation, and two on Radiation Therapy; (b) three clinical exercises; one each trimester for the purpose of correlating the major types of X-ray examination with the diagnosis and treatment of disease states; (c) informal weekly discussions, repeated each trimester for the third of the class assigned to surgery, to consider the practical application of both diagnostic and therapeutic techniques to representative surgical cases under study, and (d) eight hours of pediatric radiology.

Fourth Year Elective Course

Radiology. Drs. DEALY, P.B.B.H., ROBBINS, M.G.H., SIMON, B.I.H., NEUHAUSER, C.M.C., MARKS, N.E.D.H., SCHATZKI, Mt. A.H., and BUSHUEFF, W.R.V.A.H. Whole course, all day. Limited to two students at each hospital each month.

SURGERY

DEPARTMENT OF SURGERY

JACOB FINE, M.D., Professor of Surgery at the Beth Israel Hospital, and Head of the Department at the Beth Israel Hospital.

ROBERT E. GROSS, M.D., D.Sc. (hon.), William E. Ladd Professor of Child Surgery, and Head of the Department at The Children's Hospital.

WILLIAM V. McDERMOTT, JR., M.D., Professor of Surgery, and Head of the Department at the Boston City Hospital.

FRANCIS D. MOORE, M.D., Moseley Professor of Surgery, Head of the Department at the Peter Bent Brigham Hospital, and Secretary to the Departments of Surgery.

PAUL S. RUSSELL, M.D., A.M. (hon.), John Homans Professor of Surgery and Head of the Department of the Massachusetts General Hospital.

HENRY K. BEECHER, M.D., M.D. (hon.), Henry Isaiah Dorr Professor of Research and Teaching in Anaesthetics and Anaesthesia.

OLIVER COPE, M.D., Dr. (hon.), Professor of Surgery.

DWIGHT E. HARKEN, M.D., Clinical Professor of Surgery.

J. HARTWELL HARRISON, M.D., Clinical Professor of Genito-Urinary Surgery.

DONALD D. MATSON, M.D., Clinical Professor of Surgery.

LEROY D. VANDAM, M.D., Clinical Professor of Anaesthesia.

CARL W. WALTER, M.D., Clinical Professor of Surgery.

RICHARD WARREN, M.D., Clinical Professor of Surgery.

MARSHALL K. BARTLETT, M.D., Associate Clinical Professor of Surgery.

EDWARD HAMLIN, JR., M.D., Associate Clinical Professor of Surgery.

FRANCIS D. INGRAHAM, M.D., Associate Professor of Surgery at The Children's Hospital.

WYLAND F. LEADBETTER, M.D., Associate Clinical Professor of Surgery.

HARVARD MEDICAL SCHOOL

MELVIN P. OSBORNE, M.D., Associate Clinical Professor of Surgery.

WILLIAM H. SWEET, M.D., D.Sc. (hon.), Associate Professor of Surgery at the Massachusetts General Hospital.

CLAUDE E. WELCH, M.D., Associate Clinical Professor of Surgery.

HENRY T. BALLANTINE, JR., M.D., Assistant Clinical Professor of Surgery.

EDGAR A. BERING, JR., M.D., Assistant Clinical Professor of Surgery (on leave September 1, 1963 through September 30, 1964).

THOMAS W. BOTSFORD, M.D., Assistant Clinical Professor of Surgery.

JOHN R. BROOKS, M.D., Assistant Clinical Professor of Surgery.

CHILTON CRANE, M.D., Assistant Clinical Professor of Surgery.

EDWARD D. FRANK, M.D., Assistant Professor of Surgery at the Beth Israel Hospital, and Tutor in Medical Science.

HOWARD A. FRANK, M.D., Assistant Professor of Surgery at the Beth Israel Hospital, and Tutor in Surgery.

HERMES C. GRILLO, M.D., Assistant Clinical Professor of Surgery.

SYLVESTER B. KELLEY, M.D., Assistant Clinical Professor of Surgery.

WALTER S. KERR, JR., M.D., Assistant Clinical Professor of Surgery.

JOHN M. KINNEY, M.D., Assistant Professor of Surgery and Henry E. Warren Fellow in Surgery (through July 31, 1963).

DONALD W. MACCOLLUM, M.D., Assistant Clinical Professor of Surgery.

JOSEPH E. MURRAY, M.D., Assistant Clinical Professor of Surgery.

GEORGE L. NARDI, M.D., Assistant Clinical Professor of Surgery.

W. BRADFORD PATTERSON, M.D., Assistant Clinical Professor of Surgery.

WILLIAM H. PEARLMAN, PH.D., Assistant Professor of Biological Chemistry in the Department of Surgery.

GEORGE C. PRATHER, M.D., Assistant Clinical Professor of Surgery.

SURGERY

THOMAS B. QUIGLEY, M.D., Assistant Clinical Professor of Surgery.

JOHN W. RAKER, M.D., Assistant Clinical Professor of Surgery.

ALEXANDER M. RUTENBURG, M.D., Assistant Professor of Surgery at the Beth Israel Hospital, and Tutor in Medical Science.

J. GORDON SCANNELL, M.D., Assistant Clinical Professor of Surgery.

ROBERT S. SHAW, M.D., Assistant Clinical Professor of Surgery.

GENE M. SMITH, PH.D., Assistant Professor in Psychology in Anaesthesia at the Massachusetts General Hospital.

ROBERT M. SMITH, M.D., Assistant Clinical Professor of Anaesthesia.

GEORGE W. B. STARKEY, M.D., Assistant Clinical Professor of Surgery.

HERBERT S. TALBOT, M.D., Assistant Clinical Professor of Surgery (from January 1, 1964).

DONALD P. TODD, M.D., Assistant Clinical Professor of Anaesthesia.

WALTER R. WEGNER, M.D., Assistant Clinical Professor of Surgery.

LAMAR SOUTTER, M.D., Lecturer on Surgery.

WILLIAM G. AUSTEN, M.D., Associate in Surgery at the Massachusetts General Hospital.

BENJAMIN A. BARNES, M.D., Clinical Associate in Surgery.

ERNEST M. BARSAMIAN, M.D., Clinical Associate in Surgery.

HENRIK H. BENDIXEN, M.D., Clinical Associate in Anaesthesia.

WILLIAM F. BERNHARD, M.D., Clinical Associate in Surgery.

JOHN F. BURKE, M.D., Clinical Associate in Surgery, and Tutor in Medical Science.

BRADFORD CANNON, M.D., Clinical Associate in Surgery.

GORDON A. DONALDSON, M.D., Clinical Associate in Surgery.

SAMUEL GILMAN, M.D., Clinical Associate in Anaesthesia.

PAUL F. GRYSKA, M.D., Clinical Associate in Surgery.

PHILLIPS HALLOWELL, M.D., Clinical Associate in Anaesthesia.

LOUIS HERMANSON, M.D., Clinical Associate in Surgery.

HARVARD MEDICAL SCHOOL

CHARLES E. HUGGINS, M.D., Clinical Associate in Surgery and Tutor in Medical Science.

RAYMOND N. KJELLBERG, M.D., Associate in Surgery at the Massachusetts General Hospital.

MYRON B. LAVER, M.D., Associate in Anaesthesia at the Massachusetts General Hospital (from January 1, 1964).

LUTHER A. LONGINO, M.D., Clinical Associate in Surgery.

VERNON H. MARK, M.D., Associate in Surgery at the Massachusetts General Hospital.

S. RICHARD MUELLNER, M.D., Clinical Associate in Surgery.

ELLISON C. PIERCE, JR., M.D., Clinical Associate in Anaesthesia.

JOHN V. PIKULA, M.D., Clinical Associate in Surgery.

GEORGE S. RICHARDSON, M.D., Clinical Associate in Surgery.

CHESTER B. ROSOFF, M.D., Clinical Associate in Surgery and Tutor in Medical Science.

HERBERT S. TALBOT, M.D., Clinical Associate in Surgery (through December 31, 1963).

KENNETH J. WELCH, M.D., Clinical Associate in Surgery.

EARLE W. WILKINS, JR., M.D., Clinical Associate in Surgery.

JOHN A. WILLIAMS, M.D., Associate in Surgery at the Beth Israel Hospital.

RICHARD E. WILSON, M.D., Associate in Surgery and Tutor in Medical Science.

HENRY H. FAXON, M.D., Lecturer on Surgery.

EDWARD A. GAENSLER, M.D., Lecturer on Surgery.

JOHN M. KINNEY, M.D., Lecturer on Surgery (from August 1, 1963 through January 31, 1964).

SPYROS G. MACRIS, M.D., Visiting Lecturer on Anaesthesia (appointment expired December 31, 1963).

ADELBERT AMES, 3RD., M.D., Research Associate in Biological Chemistry in the Department of Surgery.

JAMES E. ANLIKER, PH.D., Research Associate in Anaesthesia.

CHARLES A. APFFEL, M.D., Research Associate in Surgery.

HENRY BROWN, M.D., Research Associate in Surgery.

STANLEY BULLIVANT, PH.D., Research Associate in Anatomy in the Department of Surgery.

SURGERY

- SAUL I. COHEN, PH.D., Research Associate in Surgery.
- RUTH B. KUNDSIN, SC.D., Research Associate in Bacteriology in the Department of Surgery.
- PETER B. LAMBERT, M.B., CH.B., Research Associate in Surgery.
- PADMAKAR P. LELE, M.D., DR.PHIL., Research Associate in Physiology in the Department of Surgery.
- CALVIN L. LONG, PH.D., Research Associate in Surgery (resigned December 31, 1963).
- STEVEN LUNZER, M.D., Research Associate in Surgery.
- CARLO PALMERIO, M.D., Research Associate in Surgery (resigned September 30, 1963).
- SELMA H. RUTENBURG, M.D., Research Associate in Surgery.
- EDGAR E. SMITH, PH.D., Research Associate in Surgery.
- ALBERT H. SOLOWAY, PH.D., Research Associate in Chemistry in the Department of Surgery.
- STUART E. WILES, D.V.M., Research Associate in Surgery.
- ARTHUR L. ABRAMS, M.D., Instructor in Anaesthesia.
- JOHN G. ADAMS, JR., M.D., Instructor in Anaesthesia.
- MILTON H. ALPER, M.D., Instructor in Anaesthesia.
- SOLOMON BERG, M.A., Instructor in Surgery (from November 1, 1963).
- HARRISON BLACK, M.D., Instructor in Surgery.
- HATHORN P. BROWN, M.D., Instructor in Surgery.
- JOHN W. CHAMBERLAIN, M.D., Instructor in Surgery.
- JOHN D. CONSTABLE, M.D., Instructor in Surgery.
- NATHAN P. COUCH, M.D., Instructor in Surgery.
- DEAN CROCKER, M.D., Instructor in Anaesthesia.
- ROBERT E. DESAUTELS, M.D., Instructor in Surgery.
- WILLIAM S. EASTON, M.D., Instructor in Anaesthesia.
- LAWRENCE D. EGBERT, M.D., Instructor in Anaesthesia.
- ALBERT J. FINCK, M.D., Instructor in Anaesthesia.
- WILLIAM F. FLYNN, M.D., Instructor in Surgery.
- EDWARD W. FRIEDMAN, M.D., Instructor in Surgery and Tutor in Medical Science.
- PHILIP G. GALLAGHER, M.D., Instructor in Surgery.
- F. THOMAS GEPHART, M.D., Instructor in Surgery.

HARVARD MEDICAL SCHOOL

- JULIUS E. GOLDBLATT, M.D., Instructor in Surgery.
ROBERT M. GOLDWYN, M.D., Instructor in Surgery.
EDWARD B. GRAY, JR., M.D., Instructor in Surgery.
EUGENE A. GURALNICK, M.D., Instructor in Surgery.
HANNIBAL HAMLIN, M.D., Instructor in Surgery.
JOHN HEDLEY-WHYTE, M.B., CH.B., Instructor in Anaesthesia.
WILLIAM H. HENDREN, 3RD., M.D., Instructor in Surgery.
CARL S. HOAR, JR., M.D., Instructor in Surgery.
STEPHEN J. HOYE, M.D., Instructor in Surgery.
LEE G. KENDALL, M.D., Instructor in Surgery.
BENJAMIN J. KRIPKE, M.D., Instructor in Anaesthesia.
JAMES A. KRISHER, M.D., Instructor in Anaesthesia.
GUY W. LEADBETTER, M.D., Instructor in Surgery.
FEUNG B. LEE, M.D., Instructor in Surgery.
SAMUEL LOWIS, M.D., Instructor in Surgery.
EDWARD M. MAHONEY, D.M.D., M.D., Instructor in Surgery.
PHILLIP S. MARCUS, M.D., Instructor in Anaesthesia.
JOHN B. MCKITTRICK, M.D., Instructor in Surgery.
KEITH MERRILL, JR., M.D., Instructor in Surgery.
JOST J. MICHELSEN, M.D., Instructor in Surgery.
CHARLES G. MIXTER, JR., M.D., Instructor in Surgery.
ANTHONY P. MONACO, M.D., Instructor in Surgery.
DANIEL J. MULLANE, M.D., Instructor in Surgery.
LOUIS H. NASON, M.D., Instructor in Surgery.
ROBERT A. NEWTON, M.D., Instructor in Surgery.
EDWARD T. O'HARA, M.D., Instructor in Surgery.
ROBERT G. OJEMANN, M.D., Instructor in Surgery.
EDWARD C. PARKHURST, M.D., Instructor in Surgery.
LOUIS N. PERNOKAS, M.D., Instructor in Surgery.
HENNING PONTOPPIDAN, M.D., Instructor in Anaesthesia.
WILLIAM C. QUINBY, JR., M.D., Instructor in Surgery.
JUDSON G. RANDOLPH, M.D., Instructor in Surgery (resigned September 30, 1963).
JOHN L. ROWBOTHAM, M.D., Instructor in Surgery.
JOSEPH F. RUSCIO, M.D., Instructor in Anaesthesia.

SURGERY

EDWIN W. SALZMAN, M.D., Instructor in Surgery, and Tutor in Medical Science.

SAMUEL R. SCHUSTER, M.D., Instructor in Surgery. .

BERNARD R. SEARS, M.D., Instructor in Surgery.

ARNOLD L. SEGEL, M.D., Instructor in Surgery.

JOHN SHILLITO, JR., M.D., Instructor in Surgery.

ALBERT M. STARR, M.D., Instructor in Surgery.

ARNOLD STARR, M.D., Instructor in Surgery.

JOHN B. STETSON, M.D., Instructor in Anaesthesia.

WARREN J. TAYLOR, M.D., Instructor in Surgery.

JESS B. WEISS, M.D., Instructor in Anaesthesia.

H. BROWNELL WHEELER, M.D., Instructor in Surgery.

FRANK C. WHELOCK, JR., M.D., Instructor in Surgery.

MALVIN F. WHITE, D.M.D., M.D., Instructor in Surgery.

HART ACHENBACH, M.D., Assistant in Surgery.

JOHN R. ALGIRD, M.D., Assistant in Anaesthesia.

RICHARD C. AUSTIN, M.D., Assistant in Surgery.

GEORGE E. BATTIT, M.D., Assistant in Anaesthesia.

GLENN E. BEHRINGER, M.D., Assistant in Surgery.

BOB BULLWINKEL, M.D., Assistant in Anaesthesia.

CHARLES B. BURBANK, M.D., Assistant in Surgery.

EDWIN L. CARTER, M.D., Assistant in Surgery.

CESARE G. COLETTA, M.D., Assistant in Anaesthesia.

JOSEPH W. COPEL, M.D., Assistant in Surgery.

CHESTER J. DEXTER, M.D., Assistant in Surgery.

ROBERT F. DINE, M.D., Assistant in Surgery.

MICHAEL H. M. DYKES, M.B., CH.B., Assistant in Anaesthesia.

BRUCE FOSTER, M.B., B.S., Assistant in Anaesthesia (appointment expired October 31, 1963).

JOSEPH H. GALICICH, JR., M.D., Assistant in Surgery (from August 1, 1963).

RAYMOND W. GIBBS, M.D., Assistant in Surgery.

STANLEY K. GORDON, M.D., Assistant in Surgery.

HAROLD L. GREENBERG, D.M.D., M.D., Assistant in Surgery.

IRAD B. HARDY, JR., M.D., Assistant in Surgery.

JOHN M. HEAD, M.D., Assistant in Surgery.

HARVARD MEDICAL SCHOOL

- STEPHAN E. HEDBERG, M.D., Assistant in Surgery.
DOROTHY K. HEERDEGEN, M.D., Assistant in Anaesthesia.
ZOLMAN HELFAND, D.M.D., M.D., Assistant in Surgery.
HYMAN A. HERSHMAN, M.D., Assistant in Surgery.
CLEMENT A. HIEBERT, M.D., Assistant in Surgery.
ALFRED T. JOSEPH, D.M.D., M.D., Assistant in Surgery.
CLINTON N. KOUFMAN, M.D., Assistant in Surgery.
SUSANNE J. LAMBIN, M.D., Assistant in Anaesthesia.
MYRON B. LAVER, M.D., Assistant in Anaesthesia (through December 31, 1963).
LUCY LEE, M.D., Assistant in Anaesthesia.
ARMAND A. LEFEMINE, M.D., Assistant in Surgery.
PENTTI J. LEIKKONEN, M.D., Assistant in Anaesthesia (appointment expired December 31, 1963).
HOWARD J. LEWENSTEIN, M.D., Assistant in Surgery.
JOHN B. LLOYD, M.D., Assistant in Surgery.
RONALD A. MALT, M.D., Assistant in Surgery.
DAVID E. MARCELLO, JR., M.D., Assistant in Surgery.
LEO T. MCCALLUM, M.D., Assistant in Surgery (from October 1, 1963).
BUCKNAM MCPEEK, M.D., Assistant in Anaesthesia.
CARROLL C. MILLER, M.D., Assistant in Surgery.
ELLIOTT V. MILLER, M.D., Assistant in Anaesthesia.
ROGER H. MORRIS, M.D., Assistant in Anaesthesia.
JOHN D. MURPHY, M.D., Assistant in Anaesthesia (from October 1, 1963).
ANNE W. PHILLIPS, M.D., Assistant in Surgery.
WILLIAM S. RACHLIN, M.D., Assistant in Surgery.
GRANT V. RODKEY, M.D., Assistant in Surgery.
WILLIAM P. ROGERS, JR., M.D., Assistant in Surgery.
LEON ROSENFELD, M.D., Assistant in Surgery.
S. PETER SARRIS, M.D., Assistant in Surgery.
TALBOT D. SEIGNE, M.B., CH.B., Assistant in Anaesthesia.
ROBERT SHAPIRO, M.D., Assistant in Surgery.
ELIOT M. SLATER, M.D., Assistant in Anaesthesia.
MENNO E. SLUIJTER, M.D., Assistant in Anaesthesia.

SURGERY

- JOHN C. SNOW, M.D., Assistant in Anaesthesia.
CHESTER B. STARVISH, M.D., Assistant in Anaesthesia.
JUDITH A. TASSIE, B.S., Assistant in Anaesthesia.
HOWARD A. TRACHTENBERG, M.D., Assistant in Anaesthesia.
PHILIP H. WALKER, M.D., Assistant in Surgery.
SARITA G. WALZER, M.D., Assistant in Anaesthesia.
CHIU-AN WANG, M.D., Assistant in Surgery.
TERENCE P. ABBISS, PH.D., Research Fellow in Surgery (appointment expired November 15, 1963).
TADAAKI ABE, M.D., Research Fellow in Surgery.
CLESON AQUINO, M.D., Research Fellow in Surgery (from October 1, 1963).
ALBERT C. BEATTY, JR., M.D., Research Fellow in Surgery.
ALAN G. BIRTCH, M.D., Research Fellow in Surgery.
LOUIS J. BLUMEN, M.D., Research Fellow in Surgery.
MAYO E. BROWN, M.S., Research Fellow in Surgery.
DOUGLAS N. BUTLER, PH.D., Research Fellow in Surgery (from October 1, 1963).
JOHN L. CAHILL, M.D., Research Fellow in Surgery and Henry E. Warren Fellow in Surgery.
LUIS G. CASCO ARIAS, M.D., Research Fellow in Surgery (resigned October 31, 1963).
STEWART D. CLARKE, M.B., CH.B., Research Fellow in Surgery (appointment expired August 31, 1963).
JOHN M. CROWE, M.D., Research Fellow in Surgery and Henry E. Warren Fellow in Surgery.
OSCAR S. CUNANAN, M.D., Research Fellow in Surgery (from January 1, 1964).
FUAD J. DAGHER, M.D., Research Fellow in Surgery.
MARILYN B. DAVIES, M.D., Research Fellow in Surgery (August 15 through December 31, 1963).
RENE DE HERTOGH, M.D., Research Fellow in Biological Chemistry in the Department of Surgery.
ELLEN F. DIGNAN, M.D., Research Fellow in Surgery.
JAN R. DMOCHOWSKI, M.D., Research Fellow in Surgery (from November 1, 1963).

HARVARD MEDICAL SCHOOL

JOHN FAIRGRIEVE, M.B., CH.B., Research Fellow in Surgery (appointment expired August 31, 1963).

PAUL L. FREDERICK, M.D., Research Fellow in Surgery.

YOSHIHIDE FUJIMOTO, M.D., Research Fellow in Surgery (from September 1, 1963).

RICHARD B. GIBSON, M.D., Research Fellow in Surgery.

JOHN G. GRAY, M.B., CH.B., Research Fellow in Surgery.

WILLIAM T. GREEN, JR., M.D., Research Fellow in Surgery.

JACOBUS M. GREEP, M.D., Research Fellow in Surgery.

WILLIAM P. GRISBY, M.D., Research Fellow in Surgery.

EDWARD J. GUINEY, M.B., CH.B., Research Fellow in Surgery (appointment expired December 31, 1963).

STEPHEN J. HEALEY, M.D., Research Fellow in Surgery (from December 1, 1963).

KINICHIRO HIGASHI, M.D., Research Fellow in Surgery.

GEORGE J. HILL, 2ND., M.D., Research Fellow in Surgery (August 1 through September 30, 1963).

HIROKI HIRAI, M.D., Research Fellow in Surgery.

MOTOKAZU HORI, M.D., Research Fellow in Surgery.

GORDON J. JOHNSON, M.B., CH.B., Research Fellow in Surgery (from January 1, 1964).

PETER R. KNIGHT, M.B., CH.B., Research Fellow in Surgery (appointment expired October 30, 1963).

HANS R. KRIEK, M.D., Research Fellow in Surgery.

LEE V. LEAK, PH.D., Research Fellow in Surgery.

CHUN-JEAN LEE, M.D., Research Fellow in Surgery (from September 1, 1963).

CHARLES S. LIPSON, M.D., Research Fellow in Surgery.

ADRIAN LITTON, M.B., CH.B., Research Fellow in Surgery (from November 1, 1963).

RICHARD J. LUCK, M.B., B.S., Research Fellow in Surgery (from September 1, 1963).

JOHN H. LYONS, JR., M.D., Research Fellow in Surgery (from August 15, 1963).

WILLIAM A. A. MACBETH, M.B., B.S., Research Fellow in Surgery (from October 15, 1963).

SURGERY

- JAMES C. MILLIKEN, M.D., Research Fellow in Surgery.
- ROBERT M. MITCHELL, M.B., CH.B., Research Fellow in Surgery (from January 1, 1964).
- ROGER V. MOSELEY, M.D., Research Fellow in Surgery (appointment expired December 31, 1963).
- MOIRA MURRAY, M.B., CH.B., Research Fellow in Surgery (appointment expired November 30, 1963).
- AMOS NAHOR, M.D., Research Fellow in Surgery (from December 1, 1963).
- ANTERO C. NETO, M.D., Research Fellow in Surgery.
- STIG H. M. NYSTROM, M.D., Research Fellow in Surgery.
- JASHWANT PATEL, PH.D., M.D., Research Fellow in Surgery (from August 15, 1963 — terminated December 31, 1963).
- JUAN C. PICCININI, M.D., Research Fellow in Surgery (from August 1, 1963).
- LOUIS F. PLZAK, JR., M.D., Research Fellow in Surgery (September 1 through December 31, 1963).
- PASKO RAKIC, M.D., Research Fellow in Surgery.
- ROBERT L. REPLOGLE, M.D., Research Fellow in Surgery.
- C. FRANCIS ROE, M.B., CH.B., Research Fellow in Surgery (appointment expired November 30, 1963).
- CESAR L. ROSALES, M.D., Research Fellow in Surgery.
- BARBARA H. SANFORD, PH.D., Research Fellow in Surgery (from September 1, 1963).
- AINSLIE G. R. SHEIL, M.B., B.S., Research Fellow in Surgery (from August 1, 1963).
- LAURENCE A. SOMERS, M.D., Research Fellow in Surgery.
- TAKAO SONODA, M.D., Research Fellow in Surgery (appointment expires April 30, 1964).
- RALPH W. TURNER, PH.D., Research Fellow in Surgery (from October 1, 1963).
- FRANK J. VEITH, M.D., Research Fellow in Surgery.
- CHRISTOPHER M. VICKERY, M.B., B.S., Research Fellow in Surgery (from October 1, 1963).
- DENNIS WASSON, M.B., CH.B., Research Fellow in Surgery (from September 1, 1963).

HARVARD MEDICAL SCHOOL

MAUNG S. WIN, M.B., B.S., Research Fellow in Surgery (appointment expired December 31, 1963).

DONALD K. BRIEF, M.D., Arthur Tracy Cabot Teaching Fellow in Surgery.

LOUIS H. EDMUNDS, JR., M.D., Teaching Fellow in Surgery (appointment expired December 31, 1963).

ROBERT M. FILLER, M.D., Teaching Fellow in Surgery.

JACK J. GREENBERG, M.D., Teaching Fellow in Surgery (from January 1, 1964).

EARL F. JORDAN, M.D., Teaching Fellow in Surgery.

GORDON M. KOOTA, M.D., Teaching Fellow in Surgery.

IAN D. MACLEOD, M.D., Teaching Fellow in Surgery (from January 1, 1964).

LEO T. MCCALLUM, M.D., Teaching Fellow in Surgery (through September 30, 1963).

CHARLES F. MCKHANN, M.D., Teaching Fellow in Surgery.

ALFRED P. MORGAN, JR., M.D., Teaching Fellow in Surgery.

ALAN D. PERLMUTTER, M.D., Teaching Fellow in Surgery (appointment expired December 31, 1963).

FRANCIS X. ROCKETT, M.D., Teaching Fellow in Surgery.

JOSEPH R. RUSNOCK, M.D., Teaching Fellow in Surgery (October 1 through December 31, 1963).

JOSEPH P. WIERZBINSKI, M.D., Teaching Fellow in Surgery (January 1 through March 31, 1964).

RALEIGH L. WRIGHT, M.D., Teaching Fellow in Surgery (appointment expired December 31, 1963).

Affiliated:

ASENATH PETRIE, PH.D., Research Associate in Psychology in the Department of Psychiatry.

Required Courses

Instruction will be given by amphitheatre clinics, lectures, and conferences, together with section teaching in the wards and out-patient departments of the hospitals and in the surgical research laboratories.

SURGERY

SURGERY A. *Second Year.*—The course is designed to correlate preclinical sciences with the basic principles underlying the surgical management of injury and disease. The Department of Surgery joins with the Department of Medicine in a series of exercises in physical diagnosis and laboratory medicine to offer unified instruction in case taking. Practical exercises are offered that introduce the student to basic surgical techniques.

SURGERY B. *Third Year.*—The course is conducted in the outpatient departments and wards of the hospitals affiliated with the School. The students are divided into three groups, each group in rotation being apportioned to one of the hospitals affiliated with the School for instruction in surgery over a sixty-four day period. During this period they will study general surgery and urology at the hospital to which they are assigned, and will also receive instruction in gynecology at the Free Hospital for Women and the Massachusetts General Hospital and in Otolaryngology at the Massachusetts Eye and Ear Infirmary. Instruction in the surgery of children is given during the pediatric section work at The Children's Hospital Medical Center. Opportunity for experience in surgical operative techniques is offered in Voluntary Course 32 that may be taken in conjunction with section work.

SURGERY C. *Fourth Year.*—A series of not less than two months as clinical clerk in the surgical wards of the B.I.H., B.C.H., M.G.H. or P.B.B.H. is required of each student.

During the fourth year, students will be assigned to one of the departments of anaesthesia associated with the medical school. The time spent shall be sufficient to provide an introduction to the problems and possibilities of anaesthesia as a specialty of medicine. The student will acquire some knowledge of oxygen therapy, of pre- and post-operative anaesthetic care and will administer, under supervision, the commonly used anaesthetics to patients. Factors of importance in the support and resuscitation of unconscious persons will be emphasized. This experience is designed to lead to an understanding of problems associated with the safe management of individuals handicapped by pre-existing disease, by anaesthesia, and by surgery.

SECOND YEAR

HOURS

Section work, case taking, lectures, and demonstrations on the physical diagnosis of surgical disease in conjunction with the

HARVARD MEDICAL SCHOOL

Department of Medicine. Drs. FINE, McDERMOTT, MOORE, RUSSELL, and ASSOCIATES. B.I.H., B.C.H., M.G.H., and P.B.B.H. Each student has twenty-four exercises.

84

THIRD YEAR

Amphitheatre lectures. Drs. FINE, McDERMOTT, MOORE, RUSSELL, and ASSOCIATES. Throughout the year.

34

Exercises in sections in the wards and out-patient departments at the B.I.H., M.G.H., and P.B.B.H.

186

Genito-Urinary Surgery. Section work. B.I.H., M.G.H., and P.B.B.H. Each student has ten or eleven two and a half hour exercises.

27

Children's Surgery. Section work. C.H.M.C. Each student has four one and a half hour exercises, eleven one hour exercises, and five two hour exercises.

27

Orthopedic Surgery. Section work. See Department of Orthopedic Surgery (page 183).

FOURTH YEAR

Clinical Clerkship: M.G.H. (Surgery C₁, Dr. RUSSELL and ASSOCIATES); B.C.H. (Surgery C₂, Dr. McDERMOTT and ASSOCIATES); P.B.B.H. (Surgery C₃, Dr. MOORE and ASSOCIATES); B.I.H. (Surgery C₄, Dr. FINE and ASSOCIATES).

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Fourth Year Elective Courses

5. Children's Surgery. Dr. GROSS and ASSOCIATES. C.H.M.C. Whole course, all day. Limited to two students each month.
6. Vascular and Gastrointestinal Surgery. Dr. WARREN and ASSOCIATES W.R.V.A.H. Whole course, all day. Limited to two students each month.
8. Genito-Urinary Surgery. Dr. HARRISON. P.B.B.H. Whole course, all day. Limited to two students each month.
9. Anaesthesia. Dr. BEECHER. M.G.H. or Dr. VANDAM. P.B.B.H. Whole course, all day. Attendance limited. Application to be made in person.
10. Neurosurgery. Dr. W. H. SWEET and ASSOCIATES. M.G.H. or Drs. INGRAHAM and MATSON, C.M.C. and P.B.B.H. Whole course, all day, limited to two students each month. Clinical clerkship on the neurosurgical wards.

SURGERY

11. General Surgery. Dr. McDERMOTT and ASSOCIATES. Boston City Hospital. Whole course, all day for one or two months.
20. Surgical Investigation. Dr. MOORE and ASSOCIATES. P.B.B.H. and H.M.S. Whole course, all day. Limited to two students each month. Extensive investigative opportunity is offered, particularly in the fields of metabolism (Dr. MOORE), tissue transplantation (Drs. MURRAY, STURGIS, WILSON, BROOKS), and cardiac surgery (Dr. HARKEN).
21. Surgical Investigation. Dr. RUSSELL and ASSOCIATES. M.G.H. Whole course, all day. Intensive individual investigative experience offered in fields of cardiovascular physiology (Drs. SCANNELL and SHAW), pancreatic metabolism (Dr. NARDI), tissue immunology (Dr. RUSSELL), repair and inflammation (Drs. GRILLO and BURKE).
23. Surgical Investigation. Dr. FINE and ASSOCIATES, B.I.H. Whole course, all day, in cardiovascular physiology, tissue injury, and anti-bacterial defense mechanisms.

Voluntary Courses

32. Surgical Technique. Members of the third year class may register for the following courses in surgical technique at the hospital to which they have been assigned for their section work.
 1. Operative Technique. M.G.H. Dr. C. G. MIXTER, JR. and ASSOCIATES. Thursday afternoons throughout the year. Surgical Laboratories. May only be taken coincidentally with section work.
 2. Operative Technique. P.B.B.H. Dr. MURRAY and ASSOCIATES. Thursday afternoons, October through January. Laboratory for Surgical Research, H.M.S. Students not assigned to the P.B.B.H. may take the course if vacancies occur.
 3. Operative Technique. B.I.H. Dr. FINE and ASSOCIATES. Thursday afternoons, October through November. Surgical Research Laboratory.
34. Athletic Injuries, Diagnosis and Management. Dr. QUIGLEY and ASSOCIATES. Dillon Field House. Tuesday and Thursday afternoons, October and November. Open to third year students. Limited to a total of eight students.

HARVARD MEDICAL SCHOOL

TROPICAL PUBLIC HEALTH

This course is given by the following members of the Faculty of the Harvard School of Public Health.

THOMAS H. WELLER, M.D., LL.D., Richard Pearson Strong Professor of Tropical Public Health, and Head of the Department.

FRANKLIN A. NEVA, M.D., Associate Professor of Tropical Public Health.

ELI CHERNIN, S.D., Associate Professor of Tropical Public Health.

THOMAS E. FROTHINGHAM, M.D., Assistant Professor of Tropical Public Health.

EDWARD H. MICHELSON, Ph.D., Assistant Professor of Tropical Public Health.

CHIA-TUNG PAN, M.D., M.P.H., Assistant Professor of Tropical Public Health.

ANDREW SPIELMAN, S.D., Associate in Tropical Public Health.

Required Course

PARASITOLOGY A. *Second Year.*—The important helminth and protozoan parasites of man are considered with reference to their geographic distribution, identification, mode of transmission, pathogenesis, immune reactions and methods for prevention and control. Clinical aspects and chemotherapy of parasitic diseases are discussed. Emphasis is given to methods of laboratory diagnosis.

SECOND YEAR

HOURS

Lectures, demonstrations, and laboratory work. Dr. WELLER and STAFF. Monday, Wednesday, and Friday afternoons, January and February

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Elective and Voluntary Courses

Courses offered by the Department of Tropical Public Health in the School of Public Health are open, as electives, to third and fourth year students. The research facilities of the Department are available for elective work by qualified students, and opportunities for experience in tropical areas may be arranged.

DEGREES CONFERRED

ON JUNE 13, 1963, ONE HUNDRED THIRTY-ONE DEGREES WERE
CONFERRED AS FOLLOWS:

M.D.

ERLE KEYS ADRIAN, JR., A.B. (*The Rice Inst.*) 1958, A.M. (*Univ. of Texas*) 1961.

CAROLYN KAY FRANCIS ALDREDGE, S.B. (*East Texas State Teachers Coll.*) 1958.

DAVID MICHAEL ASHER, A.B. 1959.

GEORGE RAYMOND BABINEAU, A.B. (*Bowdoin Coll.*) 1959.

JEROME BARRY BART, A.B., (*Dartmouth Coll.*) 1960, B.MED.SCI. (*ibid.*) 1961.

JAMES CIORA BECK, A.B. 1956, S.M. (*Yale Univ.*) 1957, PH.D. (*ibid.*) 1960.

RUDOLF GUSTAV BICKEL, S.B. (*Univ. of Michigan*) 1959.

RICHARD FRETWELL BRUBAKER, S.B. (*Davidson Coll.*) 1959.

WILLIAM JOSEPH CASARELLA, A.B. (*Yale Univ.*) 1959.

JAMES ROBERT CASSADY, A.B. (*Univ. of Southern California*) 1959.

PETER FRED CLARK, A.B. (*Stanford Univ.*) 1959.

CHARLES GLENN COBBS, A.B. (*Princeton Univ.*) 1955.

DALE HARVEY COWAN, A.B. 1959.

RICHARD LAWRENCE CREWS, A.B. (*Williams Coll.*) 1959.

FAITH AINSWORTH BAKER DAVIS, A.B. (*Smith Coll.*) 1957.

FRANK HOPKINS DUFFY, S.B. IN ENGIN. (*Univ. of Michigan*) 1958.

ROBERT LOUIS DUPONT, JR., A.B. (*Emory Univ.*) 1958.

GEORGE JOHN ELLIS, 3D, A.B. (*Centre Coll. of Kentucky*) 1959.

RALPH ALAN EPSTEIN, A.B. (*Columbia Univ.*) 1959.

FRANCIS CORNELIUS EVANS, JR., A.B. (*Princeton Univ.*) 1959.

IRENE FOX FINSTEIN.

JOHN EDWARD FOKER, A.B. 1959.

ROBERT RUSSELL FOSTER, A.B. 1959.

PETER THOMSON FRANCK, A.B. 1958.

JOHN MICHAEL GRIFFIN, A.B. (*Hamilton Coll.*) 1959.

THOMAS LEHMAN GRITZKA, A.B. 1959.

JON EDWARD GUDEMAN, A.B. 1958.

JAIME RAMON GUTIÉRREZ-GÓNGORA, A.B. 1958.

HARVARD MEDICAL SCHOOL

- THOMAS FRANCIS HALPIN, JR., S.B. (*Boston Coll.*) 1959.
RICHARD ELDON HICKS, S.B. (*Univ. of North Dakota*) 1959, S.B. IN MED.
(*ibid.*) 1961.
CURTIS LYLE HILL, A.B. (*Univ. of North Dakota*) 1960, S.B. IN MED.
(*ibid.*) 1961.
STEPHEN DONALD HOWARD, A.B. 1959.
WILLIAM WOLFE KATES, A.B. 1959.
JAMES PETER KEATING, A.B. 1959.
GERALD TILDEN KEUSCH, A.B. (*Columbia Univ.*) 1958.
HENRY TODD KEUTMANN, A.B. (*Amherst Coll.*) 1959.
DONALD EDWARD KLEIN, A.B. (*Princeton Univ.*) 1959.
HARVEY KLEIN, S.B. (*Univ. of Chicago*) 1959.
ROBERT TODD LEWITT, A.B. 1959.
JAMES FLAGLER LINGLEY, A.B. (*Yale Univ.*) 1959.
MICHAEL DAN LOCKSHIN, A.B. 1959.
KENNETH BERNARD MCBRIDE, S.B. (*St. Peter's Coll.*) 1959.
JAMES WARNER McDOWELL, A.B. (*Dartmouth Coll.*) 1957.
WILLIAM LINUS MACON, 4TH, A.B. (*Princeton Univ.*) 1959.
LARRY STANFORD MATTHEWS, A.B. 1959.
WILLIAM JOHN MATTSON, JR., A.B. (*Dartmouth Coll.*) 1960, B.MED.SCI.
(*ibid.*) 1961.
MARK EDWARD MOLLIVER, A.B. 1958.
RICHARD REDDING MONSON, S.B. (*North Dakota Agricultural Coll.*)
1958.
ROBERT BOOTH MOORE, A.B. (*Vanderbilt Univ.*) 1958, A.M. (*ibid.*)
1960.
JOSEPH FREDERIC MUSHINSKI, A.B. (*Yale Univ.*) 1959.
ANDREA HERZBERG NASH, A.B. (*Stanford Univ.*) 1959.
JAMES THOMAS OGILVIE, A.B. (*Univ. of Colorado*) 1959.
JOSEPH TSUTOMU OKIMOTO, A.B. (*Dartmouth Coll.*) 1960, B.MED.SCI.
(*ibid.*) 1961.
WILLIAM HENRY OLSON, JR., A.B. (*Wesleyan Univ.*) 1958.
DAVID SAMUEL PAPERMASTER, A.B. 1959.
BRUCE ROBERT PARKER, A.B., 1959.
JAMES FRANCIS PENZA, JR., A.B. (*Dartmouth Coll.*) 1959, B.MED.SCI.
(*ibid.*) 1961.
WESLEY PETER PETERSON, S.B. (*Allegheny Coll.*) 1959.
ARVIN IGNATIUS PHILIPPART, 3D, A.B. (*Univ. of Michigan*) 1959.
JOSEPH BION PHILIPSON, JR., A.B. 1959.

DEGREES CONFERRED

- ROBERT EDWARD RAWITSCHER, S.B. (*Univ. of Wisconsin*) 1959, S.B. IN MED. (*Univ. of North Dakota*) 1961.
- PETER AXELROD RAYEL, A.B. 1959.
- LUCE LAUER REISS, A.B. (*Radcliffe Coll.*) 1959.
- JOHN ROBERT RICHARDSON, JR., A.B. 1959.
- CHARLES EDWARD RIORDAN, A.B. (*Coll. of the Holy Cross*) 1959.
- DONALD BRUCE ROBERTS, S.B. (*California Inst. of Technology*) 1955.
- KENNETH BLAKE ROBERTSON, A.B. (*Dartmouth Coll.*) 1959, B.MED.SCI. (*ibid.*) 1961.
- SOL ROCKENMACHER, A.B. (*Dartmouth Coll.*) 1960, B.MED.SCI. (*ibid.*) 1961.
- DAVID LEE ROSEN, A.B. 1959.
- RONALD TILDEN ROZETT, A.B. (*New York Univ.*) 1959.
- JOEL YEHUDAH RUTMAN, A.B. (*Brandeis Univ.*) 1959.
- RICHARD JOSEPH SAMPSON, A.B. (*Univ. of Notre Dame*) 1959.
- JAMES ROBIN SAPHIR, A.B. (*Dartmouth Coll.*) 1957.
- NEIL SAMUEL SHORE, A.B. (*Princeton Univ.*) 1959.
- WARDEN BARR SISSON, A.B. (*Pomona Coll.*) 1959.
- STEPHEN ROSS SMITH, A.B. (*Princeton Univ.*) 1959.
- JOHN JOSEPH SPEIDEL, A.B. 1959.
- ARTHUR RITCHEY STAGG, JR., A.B. (*Dartmouth Coll.*) 1960, B.MED.SCI. (*ibid.*) 1961.
- WILLIAM ALTHEN STOCKER, A.B. (*Carleton Coll.*) 1958.
- DAVID DEAN SWENSON, A.B. (*Gustavus Adolphus Coll.*) 1957, S.B. IN MED. (*Univ. of North Dakota*) 1961.
- WILLIAM SPEAR TIHEN, S.B. (*Univ. of Wyoming*) 1959.
- JERRY ALLAN TOMLINSON.
- MURRAY ALBERT TOWLE, A.B. (*Dartmouth Coll.*) 1959, B.MED.SCI. (*ibid.*) 1961.
- BRADLEY TODD TROOST, S.B. (*Yale Univ.*) 1959.
- ROGER WAYNE TURKINGTON, A.B. (*Wesleyan Univ.*) 1958.
- YONG UAHWATANASAKUL, A.B. 1959.
- CLINTON DALE VERMILLION, A.B. (*Univ. of Kansas*) 1958.
- GORDON CAMPBELL VINEYARD, B.E. (*Yale Univ.*) 1959.
- FRANK ROBERT VIRNELLI, A.B. (*Dartmouth Coll.*) 1960, B.MED.SCI. (*ibid.*) 1961.
- DENNIS REED WHITLOW, A.B. (*Columbia Univ.*) 1959.
- NORMAN LOUIS WILSON, JR., S.B. (*Yale Univ.*) 1959.
- KATHARINE CORWIN POOLE WOLF, A.B. (*Radcliffe Coll.*) 1959.

HARVARD MEDICAL SCHOOL

THEODORE SAMUEL ZIMMERMAN, A.B. 1959.

JOHN ZINNER, A.B. (*Amherst Coll.*) 1958.

M.D. cum laude for Thesis in a Special Field

DAVID WILLIAM EHRENFELD, A.B. 1959.

PAUL HUNTER PLOTZ, A.B. 1958.

JOHN EDWARD REMMERS, A.B. (*Dartmouth Coll.*) 1959.

DAVID SAVITZ, A.B. 1958.

M.D. cum laude

DOUGLAS MATHER BEHRENDT, A.B. (*Amherst Coll.*) 1959.

LAWRENCE JOSEPH BERMAN, A.B. (*Princeton Univ.*) 1959.

ROBERT ANTHONY BUCCINO, A.B. (*Yale Univ.*) 1959.

ARNOLD GERALD CORAN, A.B. 1959.

PAUL JOSEPH DAVIS, A.B. (*Westminster Coll.*) 1959.

HAROLD FISHER DVORAK, A.B. (*Princeton Univ.*) 1958.

HARLEY ANDERSON HAYNES, A.B. (*Princeton Univ.*) 1959.

RALPH HALE HENDERSON, A.B. 1959.

REED THEODORE KELLER, A.B. (*Univ. of North Dakota*) 1960, S.B. IN
MED. (*ibid.*) 1961.

PAUL LEBOWITZ, A.B. (*Cornell Univ.*) 1959.

KEITH MERRITT LINDGREN, A.B. 1958.

ALBERT RENE MARTIN, A.B. (*Stanford Univ.*) 1959.

JOHN MENDELSON, A.B. 1958.

GORDON TAVSS MOORE, A.B. 1959.

GERALD NASH, A.B. (*Princeton Univ.*) 1959.

ALAN SHEFFER NIES, S.B. (*Stanford Univ.*) 1959.

MILES JOSEPH NOVY, A.B. (*Yale Univ.*) 1959.

MICHAEL NEIL OXMAN, A.B. 1958.

DAVID W. PREVEN, A.B. 1959.

EDWIN LOUIS PRIEN, JR., A.B. 1959.

DAVID BERNARD SACHAR, A.B. 1959.

ROBERT TODD SIMPSON, A.B. (*Swarthmore Coll.*) 1959.

ROBERT EDWIN STEELE, JR., A.B. (*Univ. of Missouri*) 1959.

GORDON HAROLD WILLIAMS, A.B. 1959.

WILLIAM GORDON WINTER, JR., A.B. (*Pomona Coll.*) 1958.

MARSHALL ALAN WOLF, A.B. 1958.

DEGREES CONFERRED

M.D. magna cum laude for Thesis in a Special Field

WILLIAM FRENCH ANDERSON, A.B. 1958, B.A. (*Univ. of Cambridge*)
1960.

STEPHEN ALEXANDER LERNER, A.B. 1959.

M.D. magna cum laude

THOMAS DAVID GELEHRTER, A.B. (*Oberlin Coll.*) 1957, B.A. (*Univ. of Oxford*) 1959.

FREDERICK LONDON MOOLTEN, A.B. 1953.

JAY HENRY SANDERS, A.B. (*Colgate Univ.*) 1959.

SAMUEL ROBERT SNODGRASS, JR., A.B. 1959.

ANDREW LOUIS WARSHAW, A.B. 1959.

INTERNSHIPS

CLASS OF JUNE 1963

Unless otherwise noted all internships start July 1, 1963,
for one year.

<i>Name</i>	<i>Hospital (and location)</i>	<i>Service</i>
Adrian, Erle K., Jr.	University of Texas Medical Branch, Galveston, Texas	Anatomy
Aldredge, C. Kay F.	Internship Postponed	
Anderson, W. French	Children's Hospital Medical Cen- ter, Boston	Pediatrics
Asher, David M.	King County Hospital, Seattle, Wash.	Medicine
Babineau, G. Raymond	Strong Memorial Hospital, Ro- chester, N.Y.	Pediatrics
Bart, Jerome B.	Buffalo General Hospital, Buffalo, N.Y.	Mixed
Beck, James C.	Mount Auburn Hospital, Cam- bridge	Mixed
Behrendt, Douglas M.	Massachusetts General Hospital, Boston	Surgery
Berman, Lawrence J.	Beth Israel Hospital, Boston	Medicine
Bickel, Rudolf G.	Colorado General Hospital, Den- ver, Colo.	Medicine
Brubaker, Richard F.	Massachusetts General Hospital, Boston	Surgery
Buccino, Robert A.	Boston City Hospital (Harvard Service), Boston	Medicine
Casarella, William J.	Hospital of the University of Pennsylvania, Philadelphia, Pa.	Rotating
Cassady, James R.	King County Hospital, Seattle, Wash.	Surgery
Clark, Peter F.	University of California Hospital, Los Angeles, Calif.	Surgery
Cobbs, Charles G.	University Hospital and Hillman Clinic, Birmingham, Ala.	Medicine

INTERNSHIPS

<i>Name</i>	<i>Hospital (and location)</i>	<i>Service</i>
Coran, Arnold G.	Peter Bent Brigham Hospital, Boston	Surgery
Cowan, Dale H.	Cleveland Metropolitan General Hospital, Cleveland, Ohio	Medicine
Crews, Richard L.	San Francisco General Hospital, San Francisco, Calif.	Rotating
Davis, Faith A. B.	Bronx Municipal Hospital Center, New York, N.Y.	Medicine
Davis, Paul J.	Bronx Municipal Hospital Center, New York, N.Y.	Medicine
DuPont, Robert L., Jr.	Cleveland Metropolitan General Hospital, Cleveland, Ohio	Medicine
Duffy, Frank H.	Grace-New Haven Community Hospital, New Haven, Conn.	Surgery
Dvorak, Harold F.	Massachusetts General Hospital, Boston	Pathology
Ehrenfeld, David W.	University of Florida, Gainesville, Fla.	Biochemistry
Ellis, George J., 3d	Duke Hospital, Durham, N.C.	Medicine
Epstein, Ralph A.	University of California Hospitals, San Francisco, Calif.	Surgery
Evans, Francis C., Jr.	Boston City Hospital (Harvard Service) Boston	Surgery
Finstein, Irene F.	Beth Israel Hospital, Boston	Medicine
Foker, John E.	University of Minnesota Hospital, Minneapolis, Minn.	Surgery
Foster, Robert R.	Roosevelt Hospital, New York, N.Y.	Mixed
Franck, Peter T.	University of California Hospital, Los Angeles, Calif.	Medicine
Gelehrter, Thomas D.	Massachusetts General Hospital, Boston	Medicine
Griffin, John M.	Strong Memorial Hospital, Roch- ester, N.Y.	Surgery
Gritzka, Thomas L.	King County Hospital, Seattle, Wash.	Rotating
Gudeman, Jon E.	University of Chicago Hospitals and Clinics, Chicago, Ill.	Medicine

HARVARD MEDICAL SCHOOL

<i>Name</i>	<i>Hospital (and location)</i>	<i>Service</i>
Gutierrez, Jaime R.	University Hospital, Ann Arbor, Mich.	Surgery
Halpin, Thomas F.	Presbyterian Hospital, New York, N.Y.	Surgery
Haynes, Harley A.	Peter Bent Brigham Hospital, Boston	Medicine
Henderson, Ralph H.	Boston City Hospital (Harvard Service), Boston	Medicine
Hicks, Richard E.	Peter Bent Brigham Hospital, Boston	Surgery
Hill, Curtis L.	University of Oregon Medical School Hospitals and Clinics, Portland, Oregon	Rotating
Howard, Stephen D.	San Francisco General Hospital, San Francisco, Calif.	Rotating
Kates, William W.	Beth Israel Hospital, Boston	Medicine
Keating, James P.	King County Hospital, Seattle, Wash.	Rotating
Keller, Reed T.	University Hospitals of Cleveland, Cleveland, Ohio	Medicine
Keusch, Gerald T.	Buffalo General Hospital, Buffalo, N.Y.	Medicine
Keutmann, Henry T.	New York Hospital, New York, N.Y.	Medicine
Klein, Donald E.	King County Hospital, Seattle, Wash.	Rotating
Klein, Harvey	New York Hospital, New York, N.Y.	Medicine
Lebowitz, Paul	Boston City Hospital (Harvard Service), Boston	Medicine
Lerner, Stephen A.	Peter Bent Brigham Hospital, Boston	Medicine
Lewit, Robert T.	Presbyterian-St. Luke's Hospital, Chicago, Ill.	Mixed
Lindgren, Keith M.	Boston City Hospital (Harvard Service), Boston	Medicine
Lingley, James F.	Boston City Hospital (Harvard Service), Boston	Medicine

INTERNSHIPS

<i>Name</i>	<i>Hospital (and location)</i>	<i>Service</i>
Lockshin, Michael D.	Bellevue Hospital (Cornell Service), New York, N.Y.	Medicine
McBride, Kenneth B.	Buffalo General Hospital, Buffalo, N.Y.	Medicine
McDowell, James W.	Rochester General Hospital, Rochester, N.Y.	Rotating
Macon, William L., 4th	Strong Memorial Hospital, Rochester, N.Y.	Surgery
Martin, Albert R.	Massachusetts General Hospital, Boston	Medicine
Matthews, Larry S.	University Hospital, Ann Arbor, Mich.	Surgery
Mattson, William J., Jr.	University of Illinois Research and Educational Hospitals, Chicago, Ill.	Rotating
Mendelsohn, John	Peter Bent Brigham Hospital, Boston	Medicine
Molliver, Mark E.	Massachusetts General Hospital, Boston	Pediatrics
Monson, Richard R.	Minneapolis General Hospital, Minneapolis, Minn.	Rotating
Moolten, Frederick L.	Massachusetts General Hospital, Boston	Medicine
Moore, Gordon T.	Massachusetts General Hospital, Boston	Medicine
Moore, Robert B.	University of Oregon Medical School Hospitals and Clinics, Portland, Oregon	Rotating
Mushinski, J. Frederic	Duke Hospital, Durham, N.C.	Medicine
Nash, Andrea H.	University of California Hospital, Los Angeles, Calif.	Pediatrics
Nash, Gerald	University of California Hospital, Los Angeles, Calif.	Medicine
Nies, Alan S.	King County Hospital, Seattle, Wash.	Medicine
Novy, Miles J.	Massachusetts General Hospital, Boston	Surgery

HARVARD MEDICAL SCHOOL

<i>Name</i>	<i>Hospital (and location)</i>	<i>Service</i>
Ogilvie, James T.	King County Hospital, Seattle, Wash.	Rotating
Okimoto, Joseph T.	King County Hospital, Seattle, Wash.	Rotating
Olson, William H., Jr.	Beth Israel Hospital, Boston	Medicine
Oxman, Michael N.	Boston City Hospital (Harvard Service), Boston	Medicine
Papermaster, David S.	University Hospitals of Cleveland, Cleveland, Ohio	Medicine
Parker, Bruce R.	University of Minnesota Hospitals, Minneapolis, Minn.	Medicine
Penza, James F.	Mary Hitchcock Memorial Hospital, Hanover, N.H.	Rotating
Peterson, W. Peter	Peter Bent Brigham Hospital, Boston	Pathology
Philippart, Arvin I.	Peter Bent Brigham Hospital, Boston	Surgery
Philipson, J. Bion, Jr.	Massachusetts General Hospital, Boston	Surgery
Plotz, Paul H.	Beth Israel Hospital, Boston	Medicine
Preven, David W.	University of Minnesota Hospital, Minneapolis, Minn.	Medicine
Prien, Edwin L., Jr.	Grace-New Haven Community Hospital, New Haven, Conn.	Medicine
Rawitscher, Robert E.	University Hospital, Charlottesville, Va.	Surgery
Rayel, Peter A.	University Hospitals of Cleveland, Cleveland, Ohio	Medicine
Reiss, Luce L.	Lenox Hill Hospital, New York, N.Y.	Rotating
Remmers, John E.	Boston City Hospital (Harvard Service), Boston	Medicine
Richardson, John R., Jr.	New York Hospital, New York, N.Y.	Surgery
Riordan, Charles E.	St. Vincent's Hospital of the City of New York, New York, N.Y.	Surgery
Roberts, Donald B.	University Hospital, Seattle, Wash.	Pediatrics

INTERNSHIPS

<i>Name</i>	<i>Hospital (and location)</i>	<i>Service</i>
Robertson, Kenneth B.	Minneapolis General Hospital, Minneapolis, Minn.	Rotating
Rockenmacher, Sol	Boston City Hospital (Harvard Service), Boston	Medicine
Rosen, David L.	Beth Israel Hospital, Boston	Medicine
Rozett, Ronald T.	Beth Israel Hospital, Boston	Medicine
Rutman, Joel Y.	Massachusetts General Hospital, Boston	Pediatrics
Sachar, David B.	Beth Israel Hospital, Boston	Medicine
Sampson, Richard J.	University of California Hospital, Los Angeles, Calif.	Pathology
Sanders, Jay H.	Massachusetts General Hospital, Boston	Medicine
Saphir, J. Robin	Buffalo General Hospital, Buffalo, N.Y.	Medicine
Savitz, David	Beth Israel Hospital, Boston	Medicine
Shore, Neil S.	Boston City Hospital (Harvard Service), Boston	Medicine
Simpson, Robert T.	Peter Bent Brigham Hospital, Boston	Medicine
Sisson, Warden B.	Presbyterian-St. Luke's Hospital, Chicago, Ill.	Mixed
Smith, Stephen R.	University Hospital, Ann Arbor, Mich.	Rotating
Snodgrass, Samuel R.	Massachusetts General Hospital, Boston	Medicine
Speidel, John J.	St. Luke's Hospital, New York, N.Y.	Mixed
Stagg, Arthur R., Jr.	Los Angeles County General Hospital, Los Angeles, Calif.	Rotating
Steele, Robert E., Jr.	Massachusetts General Hospital, Boston	Surgery
Stocker, William A.	Mary Hitchcock Memorial Hospital, Hanover, N.H.	Rotating
Swenson, David D.	King County Hospital, Seattle, Wash.	Rotating
Tihen, William S.	University of Kansas Medical Center, Kansas City, Kan.	Pathology

HARVARD MEDICAL SCHOOL

<i>Name</i>	<i>Hospital (and location)</i>	<i>Service</i>
Tomlinson, Jerry A.	Beth Israel Hospital, Boston	Pathology
Towle, Murray A.	Philadelphia General Hospital, Philadelphia, Pa.	Rotating
Troost, Bradley T.	Colorado General Hospital, Den- ver, Colo.	Medicine
Turkington, Roger W.	Duke Hospital, Durham, N.C.	Medicine
Uahwatanasakul, Yong	Newton-Wellesley Hospital, New- ton	Rotating
Vermillion, C. Dale	Massachusetts General Hospital, Boston	Surgery
Vineyard, Gordon C.	Peter Bent Brigham Hospital, Boston	Surgery
Virnelli, Frank R.	Minneapolis General Hospital, Minneapolis, Minn.	Rotating
Warshaw, Andrew L.	Massachusetts General Hospital, Boston	Surgery
Whitlow, Dennis R.	Massachusetts General Hospital, Boston	Surgery
Williams, Gordon, H.	University of Chicago Hospitals and Clinics, Chicago, Ill.	Medicine
Wilson, Norman L., Jr.	Presbyterian-St. Luke's Hospital, Chicago, Ill.	Medicine
Winter, William G., Jr.	Colorado General Hospital, Den- ver, Colo.	Surgery
Wolf, Katharine C. P.	Boston City Hospital (Boston Uni- versity Service) Boston	Pediatrics
Wolf, Marshall A.	Peter Bent Brigham Hospital, Boston	Medicine
Zimmerman, Theo- dore S.	University of Minnesota Hospital, Minneapolis, Minn.	Medicine
Zinner, John	Beth Israel Hospital, Boston	Medicine

Where the name of the state is omitted, the state is Massachusetts.

MEDICAL SCHOOL STUDENTS

FOURTH YEAR CLASS (1964)

- Aldredge, Horatio Ransome, 3d, A.B. (*The Rice Institute*) 1960.
Santa Monica, Calif.
- °Anderson, Kathryn Duncan, B.A. (*Univ. of Cambridge*) 1961. [Univ.
of Cambridge, Faculty of Medicine].
Westbury-on-Trym, Bristol, England
- *Ashby, Thomas Martin, A.B. (*Dartmouth Coll.*) 1960, B.MED.SCI.
(*ibid.*) 1962. [Dartmouth Medical School]. Parma, Idaho
- *Bache, Robert James, A.B. (*Univ. of North Dakota*) 1960, S.M. (*ibid.*)
1961, S.B. IN MED. (*ibid.*) 1962. [Univ. of North Dakota School of
Medicine]. Red Lake Falls, Minn.
- *Bartlett, Donald, Jr., A.B. (*Dartmouth Coll.*) 1959. [Dartmouth
Medical School]. Norwich, Vt.
- §Bennett, Terry Michael (*Univ. of Southern Calif.*).
San Marino, Calif.
- Bernard, Roger Peterick, A.B. (*Yale Univ.*) 1960. Torrington, Conn.
- Block, Peter Carl, A.B. (*Amherst Coll.*) 1959. Baltimore, Md.
- Bookwalter, John Robert, A.B. (*Amherst Coll.*) 1960.
Columbiana, Ohio
- Bradford, Michael Jay, A.B. (*Yale Univ.*) 1960. Brooklyn, N. Y.
- Brown, Borden, A.B. 1960. Fall River
- Burns, Arlen Birk, S.B. (*Southern Methodist Univ.*) 1960.
Dallas, Texas
- Buttenwieser, Paul Arthur, A.B. 1960. New York, N. Y.
- Byar, David Peery, A.B. (*Emory Univ.*) 1960. Maryville, Tenn.
- Cantril, Simeon Thain, A.B. (*Dartmouth Coll.*) 1960. Edmonds, Wash.
- Carpenter, David Orlo, A.B. 1959 Granada, Minn.
- Chapin, David Saul, A.B. 1960. Buffalo, N. Y.
- Chapman, Paul Hamilton, S.B. (*Yale Univ.*) 1960.
Cuyahoga Falls, Ohio

‡ Admitted on basis of three years' college work.

§ Admitted on basis of four years' college work.

° Transferred to the second year class.

* Transferred to the third year class.

N.B. In those cases where the college name is omitted, the college is
Harvard; where the state is omitted, the state is Massachusetts.

HARVARD MEDICAL SCHOOL

- Chase, Lewis Robert, A.B. (*Princeton Univ.*) 1960. *Ho Ho Kus, N. J.*
 Chylack, Leo Theodore, Jr., S.B. (*Yale Univ.*) 1960. *Allentown, Pa.*
 Cooper, Joel David, A.B. 1960. *Charleston, W. Va.*
 Corlette, Marvin Brown, Jr., A.B. (*Stanford Univ.*) 1960. *Pasadena, Calif.*
 Cox, William Vernon, 2d, A.B. (*Princeton Univ.*) 1959. *Auburn, Maine*
 ‡Cranton, Elmer Mitchell (*Univ. of Colorado*). *Groveland*
 Crystal, Raymond Frederick, A.B. (*Yale Univ.*) 1960. *Great Neck, N. Y.*
 Dean, Andrew Griswold, A.B. (*Oberlin Coll.*) 1960. *Fairport, N. Y.*
 *Dorsey, Joseph Leo, A.B. (*Coll. of the Holy Cross*) 1960, B.MED.SCI. (*Dartmouth Coll.*) 1962. [*Dartmouth Medical School*]. *Scranton, Pa.*
 Eaton, Stanley Boyd, Jr., A.B. (*Duke Univ.*) 1960. *Huntington, W. Va.*
 Ehrlich, Ira Bert, A.B. (*Stanford Univ.*) 1960. *Phoenix, Ariz.*
 Ettinger, Bruce, A.B. (*Columbia Univ.*) 1960. *Jamaica, N. Y.*
 Falk, George Alan, A.B. 1960. *New York, N. Y.*
 Flickinger, Charles John, A.B. (*Dartmouth Coll.*) 1960. *Bethlehem, Pa.*
 Frederick, Elizabeth Warren, A.B. (*Smith Coll.*) 1959. *Milton*
 Fung, Christopher Hing Kui, A.B. 1960. *Hong Kong*
 Galdabini, James Joseph, A.B. (*Coll. of the Holy Cross*) 1960. *Milwaukee, Wis.*
 °Ghez De Castelnuovo, Claude Paul Joseph, BACC.-ÈS-SCI.-MÉD. (*Univ. of Geneva*) première partie, 1959; BACC.-ÈS-SCI.-MÉD. (*ibid.*) deuxième partie, 1961. [*Univ. of Geneva, Faculty of Medicine*]. *Geneva, Switzerland*
 Givelber, Harry Michael, A.B. 1960. *Cleveland Heights, Ohio*
 Glickman, Robert Morris, A.B. (*Amherst Coll.*) 1960. *Brooklyn, N. Y.*
 Guggenheim, Stephen Joel, A.B. 1960. *Denver, Colo.*
 Hartmann, Lawrence Maximilian, A.B. 1958, B.A. (*Univ. of Oxford*) 1960. *New York, N. Y.*
 Havens, David Ward, A.B. (*Univ. of Rochester*) 1960. *Westhampton Beach, N. Y.*
 *Heisterkamp, David Vanderbilt, A.B. (*Dartmouth Coll.*) 1961, B.MED.SCI. (*ibid.*) 1962 [*Dartmouth Medical School*]. *Wynnewood, Pa.*
 Himmelhoch, Jonathan Moses, A.B. 1960. *Detroit, Mich.*

STUDENTS

- Holloway, George Allen, Jr., A.B. (*Yale Univ.*) 1960.
New Canaan, Conn.
- Hopkins, Cyrus Clark, s.B. (*Univ. of Michigan*) 1959.
Ann Arbor, Mich.
- Hopkins, Robert Parker, A.B. (*Amherst Coll.*) 1960. Hingham
- Hoyer, John Richard, A.B. (*Grinnell Coll.*) 1960. Windom, Minn.
- Hulley, Stephen Benjamin, A.B. (*Amherst Coll.*) 1960. Hyannis
- Hurd, Joseph Kindall, Jr., A.B. 1960. Pueblo, Colo.
- *Hutton, John James, Jr., A.B. 1958. [Univ. of Kentucky School of
Medicine]. Ashland, Ky.
- Hyde, Ernest Frederick, Jr., A.B. (*Kenyon Coll.*) 1960.
Carmichaels, Pa.
- Irvine, Alexander Rodman, A.B. (*Princeton Univ.*) 1960.
Beverly Hills, Calif.
- Irvine, Florence Pitkin Cranston, A.B. (*Mt. Holyoke Coll.*) 1960.
Claremont, Calif.
- Jackman, Jay Myron, A.B. (*Columbia Univ.*) 1960. Brooklyn, N. Y.
- Jackson, Stephen Harvey, A.B. (*Princeton Univ.*) 1960.
Jersey City, N. J.
- Jolly, Margaret Ann Haliburton, s.B. (*Univ. of Chicago*) 1959.
Allen, Okla.
- Kaltreider, Nancy Bowen, A.B. (*Univ. of Connecticut*) 1960.
Wellesley Hills
- *Kane, John Gregory, A.B. (*Dartmouth Coll.*) 1959, B.MED.SCI. (*ibid.*)
1962. [Dartmouth Medical School]. Chevy Chase, Md.
- Karchmer, Adolf Waller, A.B. (*Princeton Univ.*) 1960.
Memphis, Tenn.
- Keller, Albert Richard, A.B. 1960. Redmond, Wash.
- Kim, Joseph Chol, A.B. (*St. Anselm's Coll.*) 1958. Seoul, Korea
- Kirchman, Ernest Henry, A.B. (*Princeton Univ.*) 1960.
Jamaica, N. Y.
- Latt, Samuel Arch, s.B. (*Massachusetts Inst. of Technology*) 1960.
Harrisburg, Pa.
- Lawrence, Robert Swan, A.B. 1960. West Hartford, Conn.
- Leff, Robert, A.B. (*Columbia Univ.*) 1960. Brooklyn, N. Y.
- Leighton, Charles Cutler, A.B. (*Colby Coll.*) 1960. Newton Centre
- Levin, Myron Jay, A.B. 1960. Washington, D. C.
- Lynch, Robert Emmett, 3d, A.B. 1960. Atlanta, Ga.
- McCarley, Robert William, A.B. 1959. Mayfield, Ky.

HARVARD MEDICAL SCHOOL

- MacGregor, Rob Roy, 3d, A.B. (*Princeton Univ.*) 1960. Glen Ridge, N. J.
- *McIntosh, Edward Noel, S.B. (*Univ. of Michigan*) 1960. [Univ. of Nebraska Coll. of Medicine]. David City, Neb.
- *Manchester, Gary Haves, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*) 1962. [Dartmouth Medical School]. Washington, D. C.
- Mazer, Frederick Louis, A.B. (*Yale Univ.*) 1960. Longmeadow
- Miller, Bruce Lawrence, S.B. (*Univ. of New Hampshire*) 1960. Hinsdale, N. H.
- Mitchell, Donald Waldo, A.B. (*Stanford Univ.*) 1960. Palo Alto, Calif.
- Mueller, John Charles, A.B. 1960. Sterling, Ill.
- Nieland, Michael Louis, A.B. 1960. Chestnut Hill
- Northrup, Robert Smither, A.B. (*Yale Univ.*) 1960. Westfield, N. Y.
- °Nuzum, Claude Thomas, A.B. 1959. [Univ. of Cambridge, Faculty of Medicine]. Lexington, Ky.
- O'Connor, Robert Emmett, A.B. (*Princeton Univ.*) 1957. Charleston, W. Va.
- O'Neil, William Anthony, S.B. (*Boston Coll.*) 1954, S.M. (*ibid.*) 1960. Franklin
- °Ontjes, David Ainsworth, A.B. (*Univ. of Kansas*) 1959. [Univ. of Oxford, Faculty of Medicine]. Hutchinson, Kans.
- *Peter, Georges, A.B. 1959, B. MED. SCI. (*Dartmouth Coll.*) 1962. [Dartmouth Medical School]. Bellport, N. Y.
- Pfeffer, Robert Isa, A.B. (*Princeton Univ.*) 1960. Eggertsville, N. Y.
- Pitt, Jane Ries, A.B. (*Radcliffe Coll.*) 1960. Forest Hills, N. Y.
- *Prouty, Willard Robert, 3d, A.B. (*Dartmouth Coll.*) 1960, B. MED. SCI. (*ibid.*) 1962. [Dartmouth Medical School]. Brockton
- *Provisor, Arthur Joel, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*) 1962. [Dartmouth Medical School]. Passiac, N. J.
- Purves, Dale, A.B. (*Yale Univ.*) 1960. Philadelphia, Pa.
- Putnam, Samuel Morse, A.B. 1960. Concord
- Rapo, Seppo Ensio, S.B. (*Wheaton Coll.*) 1960. Quincy
- Rasminsky, Michael, A.B. (*Univ. of Toronto*) 1959. Ottawa, Ont., Canada
- Raye, John Ramsey, A.B. (*Amherst Coll.*) 1960. Wellesley Hills
- § Ream, John Rodney, Jr. (*Reed Coll., U. S. Military Academy. Univ. of Utah*). Dingle, Idaho
- Reynolds, Robert Edgar, A.B. (*Yale Univ.*) 1960. Xenia, Ohio

STUDENTS

- Rhoads, Jonathan Evans, Jr., A.B. (*Haverford Coll.*) 1960.
Philadelphia, Pa.
- Riddle, Matthew Casey, Jr., A.B. (*Yale Univ.*) 1960.
Portland, Oregon
- Rodarte, Joseph Robert, A.B. (*The Rice Institute*) 1960.
Temple, Texas
- *Rosefsky, Jonathan Bruce, A.B. (*Cornell Univ.*) 1960, B. MED. SCI.
(*Dartmouth Coll.*) 1962. [Dartmouth Medical School].
Binghamton, N. Y.
- Rubenstein, Joel Jay, A.B. 1960.
Newton
- Sabin, James Evan, A.B. 1960.
New York, N. Y.
- Sanders, Donald Benjamin, S.B. (*Univ. of the South*) 1959.
Sumter, S. C.
- *Sarosi, George Andrew, A.B. (*Univ. of North Dakota*) 1961, S.B. IN
MED. (*ibid.*) 1962. [Univ. of North Dakota School of Medicine].
Grand Forks, N. Dak.
- *Schmidt, David Dean, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI.
(*ibid.*) 1962. [Dartmouth Medical School].
Denver, Colo.
- Schoessler, Mary Anne, A.B. (*Willamette Univ.*) 1957. Yakima, Wash.
- Schrag, Peter Edward, A.B. 1960.
New York, N. Y.
- Schroeder, Steven Alfred, A.B. (*Stanford Univ.*) 1960. El Cerrito, Calif.
- Scott, Robert Augustine Thornton, A.B. 1960.
Lexington, Ky.
- Seidman, Joel Myron, A.B. 1960.
Framingham
- Shackney, Stanley Emanuel, A.B. 1960.
Rockfall, Conn.
- Shapiro, Arthur Gerald, A.B. (*Columbia Univ.*) 1960.
Belle Harbor, N. Y.
- *Sheehan, William Charles, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI.
(*ibid.*) 1962. [Dartmouth Medical School].
New Britain, Conn.
- *Skerker, Leonard Ben, A.B. 1960, B. MED. SCI. (*Dartmouth Coll.*) 1962.
[Dartmouth Medical School].
Westfield
- Snyder, Cecil John, S.B. (*Stanford Univ.*) 1959.
Winfield, Kans.
- Steck, Theodore Lyle, S.B. (*Lawrence Coll.*) 1960. Highland Park, Ill.
- *Steinberg, David, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*)
1962. [Dartmouth Medical School].
Flushing, N. Y.
- Strathmann, William Danford, A.B. (*Pomona Coll.*) 1960.
Claremont, Calif.
- Swarr, James Howard, S.B. (*Juniata Coll.*) 1960.
Lititz, Pa.
- *Tapper, Theodore Samuel, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI.
(*ibid.*) 1962. [Dartmouth Medical School].
Chicago, Ill.

HARVARD MEDICAL SCHOOL

- Thach, William Thomas, Jr., A.B. (*Princeton Univ.*) 1959. *Oklahoma City, Okla.*
- Thum, Charles Wesley, A.B. 1960. *Claremont, Calif.*
- Tudor, John Mack, Jr., A.B. (*Hendrix Coll.*) 1960. *North Little Rock, Ark.*
- Van Heeckeren, Daniel Wigbold, A.B. (*Colby Coll.*) 1959. *The Hague, Netherlands*
- Vernon, Thomas Martin, Jr., A.B. (*Duke Univ.*) 1960. *West Palm Beach, Fla.*
- Volpe, Joseph John, A.B. (*Bowdoin Coll.*) 1960. *Salem*
- Wallin, Victor William, Jr., A.B. (*Princeton Univ.*) 1960. *Milwaukee, Wis.*
- Ward, Samuel Porter, A.B. (*Amherst Coll.*) 1959. *Lake Bluff, Ill.*
- *Wattleworth, Anthony Steele, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*) 1962. [*Dartmouth Medical School*]. *Galena, Ill.*
- *Weintraub, William Henry, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*) 1962. [*Dartmouth Medical School*]. *Rochester, N. Y.*
- Wiese, William Hastings, A.B. (*Yale Univ.*) 1960. *Wellesley Hills*
- Williams, Frank Mathews, B.E. (*Yale Univ.*) 1960. *Bartow, Fla.*
- Witebsky, Frank Gilbert, A.B. 1960. *Buffalo, N. Y.*
- Wolpow, Edward Ray, A.B. (*Columbia Univ.*) 1959. *Brooklyn, N. Y.*
- Young, Lowell Sung-Yi, A.B. (*Princeton Univ.*) 1960. *Honolulu, Hawaii*
- *Zacharia, Laurence Alan, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*) 1962. [*Dartmouth Medical School*]. *Omaha, Neb.*
- Zimmerman, Phil George, A.B. (*Ohio Univ.*) 1960. *Holgate, Ohio*
- *Zipes, Douglas Peter, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*) 1962. [*Dartmouth Medical School*]. *Pleasantville, N. Y.*
- Zuerner, Richard Taylor, A.B. 1960. *Norwich, Conn.*

THIRD YEAR CLASS (1965)

- Aadalen, Richard Jerome, A.B. 1961. *Red Wing, Minn.*
- Adams, Herbert Dan, A.B. (*Yale Univ.*) 1961. *Wellesley Hills*
- Anderson, Larry Simon, A.B. (*Univ. of Washington*) 1961. *Santa Rosa, Calif.*

‡ Admitted on the basis of three years' college work.

* Transferred to the third year class.

N.B. In those cases where the college name is omitted, the college is Harvard; where the state is omitted, the state is Massachusetts.

STUDENTS

- Avent, Charles Kirk, 2d, A.B. (*Vanderbilt Univ.*) 1961. *Tupelo, Miss.*
- *Babson, William Warren, Jr., A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. *Gloucester*
- Baldwin, Stanley Sherman, A.B. (*Princeton Univ.*) 1961. *Marshfield, Wis.*
- Barry, William Harvey, s.B. (*Yale Univ.*) 1961. *Tulsa, Okla.*
- *Beachley, Michael Charles, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. *Harrisburg, Pa.*
- Bernstein, Robert S, A.B. (*Columbia Univ.*) 1961. *New York, N. Y.*
- Bienfang, Don Carl, s.B. (*Univ. of Illinois*) 1960. *Elmhurst, Ill.*
- *Bisgard, Carl Valdeman. (*Grinnell Coll.*). [State Univ. of Iowa Coll. of Medicine]. *Harlan, Iowa*
- Black, Ira Barrie, A.B. (*Columbia Univ.*) 1961. *Bronx, N. Y.*
- Bodenheimer, Thomas Siegmund, A.B. 1961. *Salt Lake City, Utah*
- Brisman, Ronald, A.B. 1961. *Brooklyn, N. Y.*
- Brown, Stephen Morris, A.B. (*Princeton Univ.*) 1961. *Jamaica, N. Y.*
- Bunim, Lesley Schild, A.B. (*Barnard Coll.*) 1961. *Chevy Chase, Md.*
- Burstein, Nelson Allan, A.B. (*Oberlin Coll.*) 1961. *Toledo, Ohio*
- Carmody, John Lancaster, A.B. (*Yale Univ.*) 1961. *Paxton*
- Casella, Charles Wickersham, A.B. 1961. *Naugatuck, Conn.*
- Chabner, Bruce Allan, A.B. (*Yale Univ.*) 1961. *Shelbyville, Ill.*
- *Chally, Cecil Henry, s.B. (*Univ. of North Dakota*) 1961, S.B. IN MED. (*ibid.*) 1963. [Univ. of North Dakota School of Medicine]. *Fairdale, N. Dak.*
- *Clark, Daniel Lindsay, A.B. (*Johns Hopkins Univ.*) 1961, B. MED. SCI. (*Dartmouth Coll.*) 1963. [Dartmouth Medical School]. *St. Johnsberry, Vt.*
- Clark, William Dexter, A.B. 1961. *Cincinnati, Ohio*
- Clermont, Gerald Harvey, s.B. (*Coll. of the Holy Cross*) 1961. *Adams*
- *Cohen, Edward Mitchell, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. *Swampscott*
- Cohen, Max Harry, A.B. (*Columbia Univ.*) 1961. *Macon, Ga.*
- Cooke, John Cary, 3d, A.B. (*Rice Univ.*) 1961. *Abilene, Texas*
- Cornell, Richard, A.B. (*Bowdoin Coll.*) 1961. *Fall River*
- *Couser, William Griffith, A.B. 1961, B. MED. SCI. (*Dartmouth Coll.*) 1963. [Dartmouth Medical School]. *Lebanon, N.H.*
- Cox, Paul Milton, Jr., s.B. (*Massachusetts Inst. of Technology*) 1961. *Sayreville, N. J.*
- Crespin, Stephen Ralph, A.B. 1960. *Cincinnati, Ohio*

HARVARD MEDICAL SCHOOL

- Cronk, Richard Vincent, A.B. (*Univ. of Pennsylvania*) 1960.
St. Petersburg, Fla.
- Crumpacker, Clyde S, 2d, A.B. (*Cornell Univ.*) 1961. Tabor, N.J.
- *Danielson, Kenneth Sigwald, A.B. (*Univ. of Rochester*) 1961, B. MED. SCI. (*Dartmouth Coll.*) 1963. [Dartmouth Medical School].
Pearl River, N.Y.
- *De Giacomo, Frank Charles, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. Port Chester, N.Y.
- Denckla, William Donner, A.B. 1956. Washington, D. C.
- Donahower, George Franklin, A.B. (*Denison Univ.*) 1961.
Shaker Heights, Ohio
- DuBrow, Edward Lewis, A.B. (*Princeton Univ.*) 1961. Hartford, Conn.
- Dunkman, William Bruce, A.B. (*Amherst Coll.*) 1961. Rochester, N. Y.
- Farhad, Mina, A.B. (*Barnard Coll.*) 1957, A.M. (*Radcliffe Coll.*) 1958.
Teheran, Iran
- *Feldman, Bruce Allen, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. Washington, D.C.
- *Filtzer, Horst Siegfried, (*North Dakota State Univ.*), S.B. IN MED. (*Univ. of North Dakota*) 1963. [Univ. of North Dakota School of Medicine].
Ventura, Calif.
- Fisher, George Underwood, S.B. (*Wittenberg Univ.*) 1961.
New Castle, Ind.
- Fisher, Thomas Leonard, A.B. 1959. Colima, Mexico
- Gershon, Elliot Sheldon, A.B. 1961. Brooklyn, N. Y.
- *Gewirtz, George Paul, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. Brooklyn, N.Y.
- Gilmore, Edward Bettle, A.B. (*Wesleyan Univ.*) 1961. Clairton, Pa.
- Godfrey, Henry Philip, A.B. 1961. New York, N. Y.
- Goldstein, Robert Edward, A.B. 1961. Rochester, N. Y.
- Greene, Martin Lee, A.B. 1961. Omaha, Nebr.
- Gurwith, Marc Joseph, A.B. (*Yale Univ.*) 1961. Mission, Kans.
- Hajek, Joseph Valentine, A.B. 1958. New York, N. Y.
- *Hardy, Russell Willis, Jr., A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. Cranford, N.J.
- Haughie, Glenn Elmer, A.B. 1961. Clarkfield, Minn.
- Hollenberg, Robert David, A.B. (*Swarthmore Coll.*) 1961.
Winnipeg, Manitoba, Canada
- Hufnagel, Dorothy Anne, A.B. (*Rutgers Univ.*) 1957, A.M. (*Columbia Univ.*) 1959. Jersey City, N. J.

STUDENTS

- Hughes, Edward Miles, A.B. (*Wesleyan Univ.*) 1961. *Glen Ridge, N. J.*
- *Hughes, James Eugene, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI.
(*ibid.*) 1963. [*Dartmouth Medical School*]. *Chatham, N.J.*
- Hyland, Robert Norman, A.B. (*Northwestern Univ.*) 1960.
Evanston, Ill.
- Jacobson, Eric Steven, A.B. (*Northwestern Univ.*) 1961.
Ontario, Calif.
- Jaqua, Richard Allan, A.B. (*Yale Univ.*) 1960. *Humboldt, Iowa*
- *Kagnoff, Martin Frederick (*Univ. of British Columbia*). [*Univ. of
British Columbia Faculty of Medicine*] *Vancouver, B.C., Canada*
- Kaltreider, Henry Benfer, A.B. 1960. *Rochester, N.Y.*
- Kane, Robert Lewis, A.B. (*Columbia Univ.*) 1961. *Valley Stream, N. Y.*
- Kapelovitz, Leonard Herman, s.B. (*Univ. of Chicago*) 1961.
Dickinson, N. Dak.
- *Kark, Robert Adriaan Pieter, B.A. (*Univ. of Oxford*) 1962. [*Oxford
Univ. Medical School*]. *Oak Park, Ill.*
- Kenyon, Charles Dickson, A.B. (*DePauw Univ.*) 1961.
Cambridge City, Ind.
- King, Alan Shelly, s.B. (*Juniata Coll.*) 1961. *Rochester, N. H.*
- Kondon, John Joseph, Jr., A.B. 1961. *Peabody*
- *Kopriva, Charles Joseph, A.B. (*State Univ. of South Dakota*) 1962,
s.B. IN MED. (*ibid*) 1963. [*State Univ. of South Dakota School of
Medicine*]. *Edgemont, S. Dak.*
- ‡Krenis, Laurence Joel (*New York Univ.*). *North Bellmore, N. Y.*
- Kuehl, Karen Evelyn Simpson, A.B. (*Swarthmore Coll.*) 1961.
Pleasant Ridge, Mich.
- Kuehl, Walter Michael, A.B. 1961. *Park Ridge, Ill.*
- Lane, Joseph Michael, A.B. (*Columbia Univ.*) 1961. *Great Neck, N. Y.*
- Lange, Gretchen, A.B. (*Radcliffe Coll.*) 1959. *Tucson, Ariz.*
- Langer, Terry, A.B. (*New York Univ.*) 1961. *Jamaica, N. Y.*
- Langston, Charles Spencer, A.B. 1961. *Great Neck, N. Y.*
- Levin, Arthur Lawrence, A.B. 1961. *Newton Centre*
- *Levine, Barry William, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI.
(*ibid.*) 1963. [*Dartmouth Medical School*]. *Portland, Maine*
- Loescher, Richard Alvin, A.B. (*DePauw Univ.*) 1961. *Hinsdale, Ill.*
- McCrae, Charles Rodger, A.B. 1961. *Warren, Ohio*
- McKay, David Andrew, s.B., (*Allegheny Coll.*) 1961. *Sharpsville, Pa.*

HARVARD MEDICAL SCHOOL

- *McLaughlin, Ambrose Patrick, 3d, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School] Littleton, N.H.
- McNamara, John Joseph, S.B. (*Boston Coll.*) 1961. Milton
- McReynolds, John Stephen, A.B. (*Princeton Univ.*) 1960. Houston, Texas
- Mallory, Andrew, A.B. (*Amherst Coll.*) 1961. Havertown, Pa.
- *Manchester, Joel Haves, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. Washington, D.C.
- Mark, Roger Greenwood, S.B. (*Massachusetts Inst. of Technology*) 1960. Chestnut Hill
- *Miller, Donald Wesley, Jr., A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. West Palm Beach, Fla.
- *Mixer, Charles Galloupe, 3d., S.B. (*Trinity Coll.*) 1961. [Univ. of Virginia Medical School]. Needham
- Mueller, Kenneth Howard, S.B. (*Carroll Coll.*) 1961. Hutisford, Wis.
- Muzzarelli, Uberto Tommaso, A.B. (*Amherst Coll.*) 1961. Fermo, Italy
- Neeley, George Richard, A.B. (*Stanford Univ.*) 1961. Altadena, Calif.
- Nelson, James Alonzo, A.B. 1961. Cherokee, Iowa
- *Niewoehner, Dennis Erwin, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. Sumner, Iowa
- Oberlander, Samuel Guy, A.B. (*Hobart Coll.*) 1961. Brooklyn, N. Y.
- Omenn, Gilbert Stanley, A.B. (*Princeton Univ.*) 1961. Chester, Pa.
- Poser, Gary Evan, A.B. (*Cornell Univ.*) 1961. Rocky River, Ohio
- Quereau, Marcia Musser, A.B. (*Vassar Coll.*) 1961. Wyomissing, Pa.
- Ratzan, Kenneth Roy, A.B. (*Amherst Coll.*) 1961. Cedarhurst, N. Y.
- Reider, Arthur Elliott, A.B. 1958. San Francisco, Calif.
- Reiling, Walter Anthony, Jr., S.B. (*Univ. of Dayton*) 1961. Dayton, Ohio
- Rhoads, George Grant, A.B. (*Haverford Coll.*) 1961. Philadelphia, Pa.
- Riker, Jeffrey Bruce, A.B. (*Columbia Univ.*) 1961. Flushing, N. Y.
- Roath, Michael Steven, A.B. (*Stanford Univ.*) 1961. Rolling Hills City, Calif.
- Rosenberg, Eugene Barry, A.B. 1961. Brooklyn, N. Y.
- *Rozycki, Alan Andrew, A.B. (*Dartmouth Coll.*) 1961, B. MED. SCI. (*ibid.*) 1963. [Dartmouth Medical School]. Chicago, Ill.
- Schniewind, Henry Ernest, A.B. 1961. Locust Valley, N. Y.
- Schnur, James Alfred, A.B. (*New York Univ.*) 1961. Yonkers, N. Y.
- Scolnick, Edward Mark, A.B. 1961. Dorchester

STUDENTS

- Seder, Richard Henry, A.B. 1960. Worcester
 Selden, Richard, A.B. (*Northwestern Univ.*) 1961. Sterling, Ill.
 Shurin, Paul Anton, A.B. (*Brooklyn Coll.*) 1961. Ardsley, N. Y.
 Simmers, William Moody, A.B. (*Princeton Univ.*) 1961. Cambridge
 Smith, Charles Bruce, A.B. 1958. Avon, Ohio
 Smith, Thomas Woodward, A.B. 1958. Akron, Ohio
 Snyder, Peter Joseph, A.B. (*Williams Coll.*) 1961. Wilmington, Del.
 Stachura, Maximillian Edward, A.B. (*Hamilton Coll.*) 1961.
 Buffalo, N. Y.
 Stage, David Elliott, A.B. (*Yale Univ.*) 1961. Santa Ana, Calif.
 Stein, Jeffrey Alan, A.B. 1960. Jamaica, N. Y.
 Steinglass, Peter Joseph, A.B. (*Union Coll.*) 1960. Jamaica, N.Y.
 Stenson, Robert Elliot, s.B. (*Massachusetts Inst. of Technology*) 1960.
 Philadelphia, Pa.
 Stewart, Douglas Keith, s.B. (*California Inst. of Technology*) 1961.
 Burlingame, Calif.
 Stewart, Michael Maccracken, A.B. (*Princeton Univ.*) 1957.
 Princeton, N. J.
 Stiglitz, Mark Lawrence, A.B. (*Amherst Coll.*) 1961. Gary, Ind.
 Stoll, Ralph William, s.B. (*Univ. of California*) 1958. Salamanca, N. Y.
 *Wallace, James Woodward, (*Harvard*), B. MED. SCI. (*Dartmouth*
Coll.) 1963. [Dartmouth Medical School]. Brookline
 Boston
 Wandel, Thaddeus Ludwig, A.B. 1961.
 *Weinberg, Alan Gary, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI.
 (*ibid.*) 1963. [Dartmouth Medical School]. Columbus, Ohio
 Wishner, Stanley Herman, A.B. (*Franklin and Marshall Coll.*) 1961.
 Chester, Pa.
 Wolf, Laurence Engler, A.B. 1961. Houston, Texas
 *Wolfe, Stephen Anthony, A.B. (*Dartmouth Coll.*) 1962, B. MED. SCI.
 (*ibid.*) 1963. [Dartmouth Medical School]. Falls Church, Va.
 ‡Young, Philip Earl, A.B. (*Univ. of California*) 1961.
 Los Angeles, Calif.

SECOND YEAR CLASS (1966)

- Akins, Carlton Manville, A.B. 1962. Red Wing, Minn.
 Alexander, William, A.B. (*Brandeis Univ.*) 1962. White Plains, N. Y.

‡ Admitted on the basis of three years' college work.

° Transferred to the second year class.

N.B. In those cases where the college name is omitted, the college is Harvard; where the state is omitted, the state is Massachusetts.

HARVARD MEDICAL SCHOOL

- Appel, Eugene Leonard, B.M.E. (*Cornell Univ.*) 1962. *University Heights, Ohio*
- Asher, John David, A.B. 1961. *Ithaca, N. Y.*
- Baker, Alan Robert, A.B. (*Bowdoin Coll.*) 1962. *Great Neck, N. Y.*
- Bauman, Dennis Jerry, A.B. (*Williams Coll.*) 1962. *Rochester, N. Y.*
- Beck, Laurence Holland, A.B. (*Amherst Coll.*) 1962. *Wilmington, Del.*
- Bell, Russell Sloan, A.B. (*Princeton Univ.*) 1961. *Hoopeston, Ill.*
- Bissell, Dwight Montgomery, Jr., A.B. 1962. *San Jose, Calif.*
- Bradley, Jane Elizabeth, A.B. (*Bryn Mawr Coll.*) 1962. *New York, N. Y.*
- Branda, Richard Frank, s.B. (*Univ. of Wisconsin*) 1962. *River Grove, Ill.*
- Breeden, Clara Jane, A.B. (*Stanford Univ.*) 1962. *El Cajon, Calif.*
- Brener, Bruce Jeffrey, A.B. (*Yale Univ.*) 1962. *Interlaken, N. J.*
- Buchwald, Irwin Allan, A.B. (*Amherst Coll.*) 1962. *Brooklyn, N. Y.*
- Carleton, William Michael, A.B. (*Yale Univ.*) 1962. *Providence, R. I.*
- Cassem, Ned Hughes, A.B. (*St. Louis Univ.*) 1959, PH.L. (*ibid.*) 1960, A.M. (*ibid.*) 1961. *Omaha, Neb.*
- Cihak, Robert James, A.B. (*Univ. of Notre Dame*) 1962. *Yankton, S. Dak.*
- Crounse, Jerome Burkey, A.B. 1962. *Cincinnati, Ohio*
- Crowell, Robert Morehead, A.B. (*Princeton Univ.*) 1962. *College Park, Md.*
- Cutler, Bruce St. John, A.B. (*Princeton Univ.*) 1962. *Newark, Del.*
- Dale, David Chandler, s.B. (*Carson-Newman Coll.*) 1962. *Atlanta, Ga.*
- Daniels, Gilbert Harlan, s.B. (*Yale Univ.*) 1962. *Malverne, N. Y.*
- DeLong, Mahlon Robert, A.B. (*Stanford Univ.*) 1961. *Balboa, Calif.*
- Donahue, Valentina Elizabeth Clark, A.B. (*Barnard Coll.*) 1962. *Brooklyn, N. Y.*
- Finseth, Frederick James, A.B. (*Stanford Univ.*) 1962. *Portland, Oregon*
- Fletcher, Robert Hillman, A.B. (*Wesleyan Univ.*) 1962. *Newtown, Pa.*
- Fletcher, Suzanne Estelle Wright, A.B. (*Swarthmore Coll.*) 1962. *Keswick, Va.*
- Friedman, Joel Paul, A.B. (*Princeton Univ.*) 1962. *Palm Springs, Calif.*
- Galin, Richard Safir, A.B. (*Univ. of Wisconsin*) 1962. *Milwaukee, Wis.*
- Gettelfinger, Thomas Clement, s.B. (*Univ. of Notre Dame*) 1962. *Louisville, Ky.*
- Gilmour, David Pollock, s.B. (*Davidson Coll.*) 1962. *Charlotte, N. C.*
- Ginsberg, Myron David, A.B. (*Wesleyan Univ.*) 1961. *Denver, Colo.*

STUDENTS

- Glass, Jonathan, s.B. (*Massachusetts Inst. of Technology*) 1962.
New Rochelle, N. Y.
- Glick, Thomas Harter Bachrach, A.B. 1961. Darien, Conn.
- Goetzl, Edward Joseph, A.B. (*Amherst Coll.*) 1962. Amherst
- Goldman, Thomas Carl, A.B. (*Cornell Univ.*) 1962. Brooklyn, N. Y.
- Gordon, James Harold, A.B. (*Williams Coll.*) 1962. Winchester
- Gordon, James Samuel, A.B. 1962. New York, N. Y.
- Gottlieb, Jeffrey Arnold, A.B. (*Amherst Coll.*) 1962.
Mount Vernon, N. Y.
- Grave, Gilman Drew, A.B. 1962. Rye, N. Y.
- Greenes, Robert Arthur, A.B. (*Univ. of Michigan*) 1962.
University Heights, Ohio
- Guarino, Arthur Victor, A.B. (*Coll. of the Holy Cross*) 1962.
Brooklyn, N. Y.
- Hannah, Richard Jackson, A.B. (*Dartmouth Coll.*) 1962. Weston
- Hardman, George Lynn, A.B. 1962. Philadelphia, Pa.
- Hatem, Charles Joseph, s.B. (*Boston Coll.*) 1962. Lawrence
- Hayes, Charles Robert, A.B. (*Yale Univ.*) 1962. Keytesville, Mo.
- Hrehorovich, Victor Rostislav, A.B. 1962. Bronx, N. Y.
- Hughes, Edward Francis Xavier, A.B. (*Amherst Coll.*) 1962.
Roslindale
- Ilfeld, Frederic William, Jr., A.B. (*Yale Univ.*) 1962.
Beverly Hills, Calif.
- ‡Irwin, Robert Joseph (*Denison Univ.*) Cleveland, Ohio
- Jacobs, Edward Ellis, Jr., A.B. (*Princeton Univ.*) 1962. Buffalo, N. Y.
- Jurgeleit, Herbert Clement, A.B. (*Yale Univ.*) 1962. Townshend, Vt.
- Kaufman, Jay Henry, A.B. (*Princeton Univ.*) 1962.
Rockville Centre, N. Y.
- Kempczinski, Richard Francis, A.B. (*Coll. of the Holy Cross*) 1962.
Brooklyn, N. Y.
- Kern, Michael Lee, A.B. (*Yale Univ.*) 1962. Cincinnati, Ohio
- Koops, Herbert John, s.B. (*United States Military Academy*) 1957.
Ridgewood, N. Y.
- Koran, Lorrin Michael, A.B. 1962. Los Angeles, Calif.
- Krainin, James Mark, A.B. 1962. New York, N. Y.
- Krant, David Alan, A.B. 1962. Atlanta, Ga.
- Lamb, Joan Wingate, A.B. (*Wellesley Coll.*) 1961. Concord
- Leary, Joan Marie, A.B. (*Mt. Holyoke Coll.*) 1962. Roslindale
- Levine, Melvin David, A.B. (*Brown Univ.*) 1961. [Oxford Univ.
Medical School]. New York, N.Y.

HARVARD MEDICAL SCHOOL

- Levine, Norman Steven, A.B. (*Princeton Univ.*) 1962. Paterson, N. J.
 Levisohn, Steven Ralph, A.B. 1962. Denver, Colo.
 Loewenstein, Matthew Samuel, S.B. (*Union Coll.*) 1962. Forest Hills, N. Y.
 Ludden, John Marten, A.B. 1962. Milwaukee, Wis.
 Lutz, Michael David, A.B. (*Yale Univ.*) 1962. Reading, Pa.
 McNeil, Barbara Joyce, A.B. (*Emmanuel Coll.*) 1962. Dorchester
 Mark, Eugene Jerome, A.B. (*Oberlin Coll.*) 1962. Kent, Ohio
 Marmor, Michael Franklin, A.B. 1962. Los Angeles, Calif.
 Mastroianni, Nicholas Anthony, Jr., A.B. 1962. Hopedale
 Mendelsohn, George Emanuel, A.B. 1962. Alton, Ill.
 Micheli, Lyle Joseph, A.B. 1962. Peru, Ill.
 Mogielnicki, Robert Peter, A.B. (*Cornell Univ.*) 1962. Hartford, Conn.
 Molinoff, Perry Brown, A.B. 1962. Smithtown, N. Y.
 Monath, Thomas Patrick Charles, A.B. 1962. Hewlett Harbor, N. Y.
 Nasr, Hooshang, A.B. (*Yale Univ.*) 1962. Tehran, Iran
 Neisuler, Ross Francis, A.B. 1962. Schenectady, N. Y.
 Nelson, John Paul, A.B. (*Univ. of Notre Dame*) 1962. Breckenridge, Minn.
 Nelson, Scott Haviland, A.B. (*Yale Univ.*) 1962. Colorado Springs, Colo.
 Oren, Mark Edward, A.B. (*Cornell Univ.*) 1962. Catskill, N. Y.
 Owen, Robert Leo, A.B. (*Univ. of Oklahoma*) 1962. Bartlesville, Okla.
 Payne, Douglas DeFrees, A.B. 1962. Dayton, Ohio
 Pidot, Anne Louise Rassiga, A.B. (*Bryn Mawr Coll.*) 1962. Long Beach, N. Y.
 Pincus, Theodore Paul, A.B. (*Columbia Univ.*) 1961. New York, N. Y.
 Pine, Michael Boehmer, A.B. (*Brandeis Univ.*) 1962. New York, N. Y.
 Pipkin, Robert Donald, A.B. (*Regis Coll.*) 1962. Denver, Colo.
 Poole, Thomas Allen, A.B. (*Univ. of Pennsylvania*) 1962. Port Allegany, Pa.
 Proskauer, Stephen, A.B. 1962. Brookline
 Ravenscroft, Kent, Jr., A.B. (*Yale Univ.*) 1962. St. Louis, Mo.
 Reckler, Jon Michael, A.B. 1962. Denver, Colo.
 Roglieri, John Louis, S.B. (*Lehigh Univ.*) 1960. Scotch Plains, N. J.
 Rothenberg, Richard Bernard, A.B. (*Columbia Univ.*) 1962. Jamaica, N. Y.
 Rubin, Robert Harold, A.B. (*Williams Coll.*) 1962. West Hartford, Conn.

STUDENTS

- Scharff, David Edward, A.B. (*Yale Univ.*) 1962. St. Louis, Mo.
 Schoenbaum, Stephen Carl, A.B. (*Swarthmore Coll.*) 1962. Medford
 Scholand, Joseph Francis, A.B. (*St. John Fisher Coll.*) 1962. Spencerport, N. Y.
 Schott, John William, A.B. (*Johns Hopkins Univ.*) 1962. LaSalle, Ill.
 Shipley, William Upjohn, A.B. (*Yale Univ.*) 1962. Norton
 Siegel, Arthur Jay, A.B. (*Swarthmore Coll.*) 1962. Orlando, Fla.
 Siegel, Robert Charles, A.B. (*Princeton Univ.*) 1962. Kingston, Pa.
 Smith, Richard Wilbur, A.B. 1962. Rochester, N. Y.
 Steinberg, Alfred David, A.B. (*Princeton Univ.*) 1962. Great Neck, N. Y.
 Stevenson, John Eric, A.B. (*St. Olaf Coll.*) 1962. Viroqua, Wis.
 Strong, Steven Roger, S.B. (*Union Coll.*) 1962. Schenectady, N. Y.
 Stubblefield, Phillip George, A.B. 1962. Liberal, Kans.
 Sun, Andrew Suian On, S.B. (*Univ. of California*) 1961. San Francisco, Calif.
 Sweetland, Ralph Coburn, A.B. 1962. Cambridge
 Teichholz, Louis Evan, A.B. 1962. Passaic, N. J.
 Templeton, John Marks, Jr., A.B. (*Yale Univ.*) 1962. Englewood, N. J.
 Torop, Paul, A.B. (*Yale Univ.*) 1962. Yonkers, N. Y.
 Wegman, David Howe (*Swarthmore Coll.*) Ann Arbor, Mich.
 Weiner, Michael Samuel, A.B. 1962. Williamsville, N. Y.
 Weintraub, Bruce Dale, A.B. (*Princeton Univ.*) 1962. Buffalo, N. Y.
 Winig, Paul Ira, A.B. 1962. Trenton, N. J.
 Wood, William Costin, S.B. (*Wheaton Coll.*) 1962. Charlotte, N. C.
 Young, Dean Francis, A.B. (*Kenyon Coll.*) 1962. Dayton, Ohio

FIRST YEAR CLASS (1967)

- Aaron, Robert Steven, A.B. (*Columbia Univ.*) 1963. Teaneck, N.J.
 Alden, Katherine Frances, A.B. (*Radcliffe Coll.*) 1963. Cleveland, Ohio
 Arradondo, John El Roy, A.B. (*Oklahoma City Univ.*) 1963. Altus, Okla.
 Axelrod, Lloyd, A.B. (*Princeton Univ.*) 1963. New York, N.Y.
 Bagley, Charles Miller, Jr., A.B. (*Carleton Coll.*) 1963. Duluth, Minn.
 Ballantine, Thomas Van Ness, A.B. (*Princeton Univ.*) 1963. Boston

‡ Admitted on the basis of three years' college work.

N.B. In those cases where the college name is omitted, the college is Harvard; where the state is omitted, the state is Massachusetts.

HARVARD MEDICAL SCHOOL

- Berc, Kenneth Myles, A.B. (*Colgate Univ.*) 1963. Roslyn, N.Y.
 Bernet, Francis William, A.B. (*Coll. of the Holy Cross*) 1963. Worcester
 Bleiberg, Mona Louise, A.B. (*Univ. of Chicago*) 1963. Maplewood, N.J.
 Bonnar, James Millar, 3d, A.B. 1963 Middleboro
 Brauner, Gary Jules, A.B. (*Yale Univ.*) 1963. Fairfield, Conn.
 Bucknall, William Eric, A.B. (*Univ. of Texas*) 1963. Austin, Texas
 Bunow, Barry Joel, A.B. (*Univ. of California, Berkeley*) 1963. Oakland, Calif.
 Burgess, Joan Tucker, A.B. (*Oberlin Coll.*) 1963. Allison Park, Pa.
 Chesebro, Bruce Wilcox, S.B. (*California Inst. of Technology*) 1963. Los Angeles, Calif.
 Conger, Seymour Beach, A.B. (*Amherst Coll.*) 1963. Pleasantville, N.Y.
 Curry, Edward Bryant, S.B. (*Morehouse Coll.*) 1963. Bessemer, Ala.
 Daniel, Alan, A.B. (*Amherst Coll.*) 1963. New York, N.Y.
 Desser, Richard Kenneth, A.B. (*Univ. of California, Berkeley*) 1963. Chicago, Ill.
 Diamond, Richard Donald, A.B. (*Brooklyn Coll.*) 1963. Brooklyn, N.Y.
 Dolin, Raphael, A.B. 1963. Allen Park, Mich.
 Dorman, John Merrill, A.B. (*Williams Coll.*) 1963. Pittsfield
 Dorner, Douglas Bloom, A.B. (*Amherst Coll.*) 1963. Des Moines, Iowa
 Eagleton, Lanie Earl, A.B. (*Hamilton Coll.*) 1963. Olney, Ill.
 Ellman, Leonard Lloyd, A.B. 1963. Brooklyn, N.Y.
 Erdmann, Albert John, 3d, A.B. 1963. New York, N.Y.
 Fingert, Judith Ann, A.B. (*Wellesley Coll.*) 1963. St. Louis, Mo.
 Funkenstein, Herrman Harris, A.B. (*Princeton Univ.*) 1961; B.A. (*Univ. of Oxford*) 1963. Boston
 Gail, Mitchell Henry, A.B. 1962. Lexington, Ky.
 ‡Galton, Virginia Renée. (*Univ. of Rochester*) New York, N.Y.
 Gardner, Laurence Bernard, S.B. (*Massachusetts Inst. of Technology*) 1963. Lynbrook, N.Y.
 Gelb, Lawrence David, S.B. (*Univ. of Michigan*) 1963. Detroit, Mich.
 ‡Goldsmith, Philip Lawrence, (*Cornell Univ.*) New York, N.Y.
 Goldstein, Stanton Philip, A.B. 1963. Ossining, N.Y.
 Gorelick, Kenneth Paul, A.B. (*Rutgers Univ.*) 1962. Paterson, N.J.
 Greene, Andrew Frank, A.B. (*Amherst Coll.*) 1963. Cincinnati, Ohio
 Gustafson, James Paul, A.B. 1963. Saginaw, Mich.
 Gutheil, Thomas Gordon, A.B. 1963. New York, N.Y.
 Hinds, James Wadsworth, A.B. (*Williams Coll.*) 1963. Waterville, Maine

STUDENTS

- Hirschfeld, David Seth, A.B. 1963. *Woods Hole*
 Holmes, Robert Henry, A.B. (*Amherst Coll.*) 1963. *Denver, Colo.*
 Holt, William Steven, S.B. (*Bates Coll.*) 1963. *Waterville, Maine*
 Hurwitz, Alfred Lewis, A.B. 1963. *Brookline*
 Janeway, Charles Alderson, Jr., A.B. 1963. *Weston*
 Jencks, Stephen Francis, A.B. 1962. *Towson, Md.*
 Johnson, Burt Powers, A.B. 1962. *Ardsley, N.Y.*
 Kadish, Lawrence Jerome, A.B. (*Princeton Univ.*) 1963. *West Orange, N.J.*
 Kahn, James Brodie, A.B. 1963. *Manchester, N.H.*
 Kahn, Jesse Lewis, A.B. (*Brooklyn Coll.*) 1963. *Brooklyn, N.Y.*
 Knopf, Harry Louis Safir, A.B. 1963. *Trenton, N.J.*
 Korshin, Oliver Marc, A.B. (*St. John's Coll., Maryland*) 1963. *Whitestone, N.Y.*
 Kourides, Ione Anne, A.B. (*Wellesley Coll.*) 1963. *Forest Hills, N.Y.*
 Kumpe, David Allen, A.B. (*Oberlin Coll.*) 1963. *Covington, Ky.*
 Kupor, Lary Richard, S.B. (*Brooklyn Coll.*) 1963. *Brooklyn, N.Y.*
 Landrigan, Philip John, A.B. (*Boston Coll.*) 1963. *West Roxbury*
 Larsen, George Keefe, A.B. (*Emory Univ.*) 1963. *Decatur, Ga.*
 Lazar, Gerald Kenneth, A.B. (*Brooklyn Coll.*) 1963. *Brooklyn, N.Y.*
 Levine, David Norman, A.B. (*Yeshiva Univ.*) 1963. *Los Angeles, Calif.*
 Levine, Stanley Bryant, S.B. (*Tufts Univ.*) 1963. *Denver, Colo.*
 Lewinnek, George Eric, A.B. (*Carleton Coll.*) 1963. *Merrill, Wis.*
 Lisanti, Michael Joseph, A.B. (*Cornell Univ.*) 1963. *Brooklyn, N.Y.*
 Lurie, Melvyn Louis, A.B. (*Johns Hopkins Univ.*) 1963. *Baltimore, Md.*
 Mabogunje, Oluwatope Abimbola, A.B. (*Brandeis Univ.*) 1963. *Ibadan, Nigeria*
 MacDougal, Bruce Albert, A.B. (*Williams Coll.*) 1963. *Bangor, Maine*
 Malter, Ira Joel, A.B. (*Columbia Univ.*) 1963. *Riverdale, N.Y.*
 Meissner, William Walter, A.B. (*St. Louis Univ.*) 1956; A.M. (*ibid.*)
 1957; PH.L. (*ibid.*) 1957; S.T.B. (*Woodstock Coll.*) 1960; S.T.L.
 (*ibid.*) 1962. *Buffalo, N.Y.*
 Mills, Roberta Ann, S.B. (*Allegheny Coll.*) 1963. *St. Albans, W. Va.*
 Mitch, William Evans, 2d, A.B. 1963. *Birmingham, Ala.*
 Morris, Ira Alan, A.B. (*Boston Univ.*) 1963. *Brookline*
 Morrison, Peter Nelson, A.B. (*Columbia Univ.*) 1963. *Great Neck, N.Y.*
 Murphy, William Mont, A.B. (*Drake Univ.*) 1963. *Des Moines, Iowa*
 Murray, Michael John, A.B. (*State Univ. of Iowa*) 1963. *Logan, Iowa*
 Newhouse, Jeffrey Hooker, A.B. (*Princeton Univ.*) 1963. *Upper Nyack, N.Y.*

HARVARD MEDICAL SCHOOL

- Ogunye, Medrose Olu, A.B. (*Western Reserve Univ.*) 1963. Ondo, Nigeria
- O'Neill, Daniel Patrick, s.B. (*Massachusetts Inst. of Technology*) 1963. Roslindale
- Pasternak, Derick Peter, A.B. 1963. New York, N.Y.
- Perkins, David George, A.B. 1963. Belmont
- Phillips, Lawrence Stone, A.B. (*Swarthmore Coll.*) 1963. Washington, D.C.
- Pitts, William Reid, Jr., A.B. (*Princeton Univ.*) 1963. Charlotte, N.C.
- Putnoi, Donald William, A.B. (*Columbia Univ.*) 1963. Brooklyn, N.Y.
- Reiling, Richard Bernard, s.B. (*Univ. of Dayton*) 1963. Dayton, Ohio
- Rogell, Gerald David, A.B. 1963. Newton Centre
- Rohde, Jon Eliot, A.B. (*Amherst Coll.*) 1963. Barrington, R.I.
- Roth, Gerald James, A.B. 1963. Mankato, Minn.
- Rowntree, Ellen Margaret Behrendt, A.B. (*Wellesley Coll.*) 1963. St. Paul, Minn.
- Ruberg, Robert Lionel, A.B. (*Haverford Coll.*) 1963. Philadelphia, Pa.
- Saxbe, William Bart, Jr., A.B. (*Amherst Coll.*) 1963. Mechanicsburg, Ohio
- Schantz, Arthur Stephen, s.B. (*Massachusetts Inst. of Technology*) 1963. Brooklyn, N.Y.
- Schnitker, Paul Clayton, A.B. (*Yale Univ.*) 1963. Toledo, Ohio
- Schoolwerth, Anton Cornelis, A.B. (*Princeton Univ.*) 1963. Glen Ellyn, Ill.
- Shapiro, Daniel William, s.B. (*Massachusetts Inst. of Technology*) 1963. New York, N.Y.
- Shenkin, Budd Norman, A.B. 1963. Wynnewood, Pa.
- Shulman, Richard Stanley, A.B. 1963. Swampscott
- Silver, David Jay, A.B. (*Amherst Coll.*) 1963. Bristol, Conn.
- Simmons, Michael Anthony, A.B. 1963. Fort Wayne, Ind.
- Simon, Harvey Bruce, A.B. (*Yale Univ.*) 1963. Fort Lauderdale, Fla.
- Singer, Karl Lawrence, A.B. 1963. Huntington Woods, Mich.
- Smith, Donald Angehr, A.B. 1963. Little Rock, Ark.
- Smith, Douglas Grant, A.B. (*Pomona Coll.*) 1963. San Marino, Calif.
- Sommer, Alfred, s.B. (*Union Coll.*) 1963. Jamaica, N.Y.
- Starr, Stuart Eliot, A.B. (*Pomona Coll.*) 1963. Los Angeles, Calif.
- Stein, Anna, A.B. (*Barnard Coll.*) 1963. New York, N.Y.
- Steinman, Ralph Marvin, B.Sc. (*McGill Univ.*) 1963. Sherbrooke, P.Q., Canada

STUDENTS

- Stelovich, Steve Dennis, A.B. 1963. *Salt Lake City, Utah*
 Stossel, Thomas Peter, A.B. (*Princeton Univ.*) 1963. *Wilmette, Ill.*
 Sugihara, Jared Genji, A.B. (*Yale Univ.*) 1963. *Honolulu, Hawaii*
 Walker, Pamela Pauline, A.B. (*Radcliffe Coll.*) 1963. *Montclair, N.J.*
 Weiden, Paul Lincoln, A.B. 1963. *Atherton, Calif.*
 Weikel, Anthony Monroe, S.B. (*Massachusetts Inst. of Technology*)
 1963. *Lathrop Village, Mich.*
 Weinerth, John Louis, S.B. (*Bucknell Univ.*) 1963. *Easton, Pa.*
 Weir, Gordon Campbell, A.B. (*Dartmouth Coll.*) 1963. *Cleveland Heights, Ohio*
 Wesley, John Robert, A.B. 1963. *Ann Arbor, Mich.*
 Wolman, Carol Stone, A.B. (*Radcliffe Coll.*) 1962. *Philadelphia, Pa.*
 Young, Stephen Wiley, A.B. (*Univ. of North Carolina*) 1963. *Angier, N.C.*
 Zaentz, Samuel Donald, A.B. (*Williams Coll.*) 1963. *Clifton, N.J.*

MEDICAL SCHOOL SUMMARY 1963-1964

Fourth Year	137
Third Year	133
Second Year	117
First Year	115
Total	<u>502</u>

HARVARD MEDICAL SCHOOL

COLLEGES REPRESENTED

Allegheny College	2	Hamilton College	2
Amherst College	25	Harvard University	124
Barnard College	4	Haverford College	5
Bates College	1	Hendrix College	1
Boston College	4	Hobart College	1
Boston University	1	Holy Cross, College of the ..	6
Bowdoin College	3	Illinois, University of	1
Brandeis University	3	Iowa, State University of	1
British Columbia, University of	1	Johns Hopkins University	3
Brooklyn College	5	Juniata College	2
Brown University	1	Kansas, University of	1
Bryn Mawr College	2	Kent State University	1
Bucknell University	1	Kenyon College	2
California Institute of Tech-		Lawrence College	1
nology	3	Lehigh University	1
California, University of (at		Los Angeles City College	1
Berkeley)	3	Massachusetts Institute of Tech-	
California, University of (at		nology	10
Los Angeles)	2	McGill University	1
California, University of South-		Michigan, University of	4
ern	1	Missouri, University of	1
Cambridge, University of (Eng-		Morehouse College	1
land)	1	Mount Holyoke College	2
Carleton College	2	National Defense Medical Cen-	
Carroll College	1	ter (Formosa)	1
Carson-Newman College	1	New Asia College (Hong	
Chicago, University of	3	Kong)	1
Colby College	2	New Hampshire, University of	1
Colgate University	1	New York University	3
Colorado, University of	1	North Carolina, University of	1
Columbia University	19	North Dakota State University	1
Connecticut, University of	1	North Dakota, University of ..	3
Cornell University	9	Northwestern University	3
Dartmouth College	35	Notre Dame, University of ...	3
Davidson College	1	Oberlin College	5
Dayton, University of	2	Ohio University	1
Denison University	2	Oklahoma, University of	2
DePauw University	2	Oxford, University of (Eng-	
Drake University	1	land)	2
Duke University	2	Paris, Université de (à La Sor-	
Emmanuel College	1	bonne)	1
Emory University	2	Pennsylvania, University of ...	2
Franklin and Marshall College .	1	Pomona College	3
Geneva, University of	1	Portland State College	1
Grinnell College	2	Princeton University	37

COLLEGES REPRESENTED

Radcliffe College	6	United States Military Academy	2
Reed College	1	Utah, University of	1
Regis College	1	Vanderbilt University	1
Rice University	3	Vassar College	1
Rochester, University of	3	Washington, University of	1
Rutgers University	2	Webb Institute of Naval Ar-	
Saint Anselm's College	1	chitecture	1
St. John's College (Maryland)	1	Wellesley College	4
Saint John Fisher College	1	Wesleyan University	5
Saint Louis University	2	Western Reserve University ..	1
Saint Olaf College	1	Wheaton College (Illinois) ...	2
San Francisco, University of ...	1	Willamette University	1
Smith College	1	Williams College	8
Sorbonne (<i>see Paris</i>)		Wisconsin, University of	2
South, University of the	1	Wittenberg University	1
South Dakota, University of ..	1	Yale University	39
Southern California (<i>see Cali-</i>		Yeshiva University	1
<i>fornia</i>)			
Southern Methodist University ..	1	Total	522
Stanford University	10	Counted more than once	20
Swarthmore College	7		
Texas, University of	1	Total number of students..	502
Toronto, University of	1		
Trinity College	1	Entered advanced standing	54
Tufts University	1	Number of colleges represented	120
Tulane University	1	Number of college graduates ..	492
Union College	4	Number of non-graduates	10

MEDICAL SCHOOLS REPRESENTED BY STUDENTS WHO ENTERED HARVARD MEDICAL SCHOOL WITH ADVANCED STANDING

British Columbia, University of, Faculty of Medicine	1	North Dakota, University of, School of Medicine	4
Cambridge, University of (Eng- land)	2	Oxford, University of (Eng- land)	3
Dartmouth Medical School	38	South Dakota, State University of, School of Medicine	1
Geneva, University of, Faculty of Medicine	1	Virginia, University of, Medical School	1
Iowa, State University of, Col- lege of Medicine	1	Total	54
Kentucky, University of, Col- lege of Medicine	1	Total number of students ad- mitted to first year standing	448
Nebraska, University of, Col- lege of Medicine	1	Total	502

SCHOOL OF DENTAL MEDICINE

STAFF

- ERNEST E. ADAMS, D.M.D., Instructor in Operative Dentistry.
JOHN T. ALBRIGHT, D.D.S., Clinical Associate in Oral Pathology.
BENJAMIN H. AMDUR, PH.D., Research Associate in Biological Chemistry at the Forsyth Dental Infirmary for Children.
MELVIN A. ANDELL, D.D.S., Instructor in Orthodontics.
DINO R. ANGELICI, D.D.S., Research Fellow in Orthodontics.
DAVID T. ARMSTRONG, PH.D., Associate in Anatomy in the School of Dental Medicine.
DOUGLAS A. ATWOOD, M.D., D.M.D., Instructor in Prosthetic Dentistry.
HERBERT I. BADER, D.D.S., Research Fellow in Periodontology.
HARRY K. BAILEY, D.M.D., Instructor in Operative Dentistry.
CHARLES G. BARBER, D.D.S., Research Fellow in Orthodontics.
KENNETH S. BERMAN, D.M.D., Research Fellow in Periodontology.
ARNOLD E. BINDER, D.M.D., Instructor in Orthodontics.
NEVILLE A. BOOTH, D.M.D., Instructor in Oral Surgery.
CARMEN C. BROWN, D.M.D., Research Fellow in Dentistry.
FINN BRUDEVOLD, D.D.S., Professor of Dentistry at the Forsyth Dental Infirmary for Children.
NORMAN T. BUDDE, D.M.D., Instructor in Pediatric Dentistry.
DUANE F. CARBONE, D.M.D., Research Fellow in Dental Medicine.
RICHARD S. CARROLL, PH.D., Assistant to the Dean of the School of Dental Medicine for Planning and Development.
JOSEPH CHAMBERLAIN, PH.D., Research Fellow in Pharmacology in the School of Dental Medicine.
ROBERT T. CHATTERTON, JR., PH.D., Research Fellow in Biological Chemistry in the School of Dental Medicine.
GEORGE CHRISTMAN, D.M.D., Instructor in Oral Surgery.
CARL G. COHEN, D.M.D., Instructor in Pediatric Dentistry.
MELVIN I. COHEN, D.M.D., Associate Clinical Professor of Orthodontics.
PAUL R. COURANT, D.M.D., Research Fellow in Periodontology.

SCHOOL OF DENTAL MEDICINE

COLIN DAWES, PH.D., Instructor in Biological Chemistry in the School of Dental Medicine.

VINCENT DEANGELIS, D.M.D., Research Fellow in Orthodontics.

HERMAN DE WILDE, M.D., D.M.D., Clinical Associate in Oral Surgery.

I. LEON DOGON, L.D.S., D.M.D., Research Associate in Dental Medicine.

ROBERT M. DONAHUE, D.M.D., Research Fellow in Orthodontics.

JOEL P. DOUGLAS, D.M.D., Instructor in Orthodontics.

JAMES M. DUNNING, D.D.S., M.P.H., Clinical Professor of Ecological Dentistry.

HAROLD L. EHRLICH, D.M.D., Assistant Clinical Professor of Prosthetic Dentistry.

HENRY D. EPSTEIN, D.M.D., Clinical Associate in Periodontology.

JAMES W. ETHERINGTON, D.M.D., Assistant Clinical Professor of Operative Dentistry.

DAVID J. FARRELL, D.M.D., Assistant Clinical Professor of Prosthetic Dentistry.

NORTON FISHMAN, D.M.D., Instructor in Prosthetic Dentistry.

JACK B. FLANAGAN, JR., D.M.D., Research Fellow in Orthodontics.

STEPHEN H. GAMM, D.M.D., Research Fellow in Orthodontics.

ANTHONY A. GIANELLY, D.M.D., Research Fellow in Orthodontics.

RONALD J. GIBBONS, PH.D., Associate in Bacteriology at the Forsyth Dental Infirmary for Children.

DONALD B. GIDDON, D.M.D., Associate in Ecological Dentistry.

HAROLD S. GOLD, D.M.D., Instructor in Prosthetic Dentistry.

PAUL GOLDBABER, D.D.S., Associate Professor of Periodontology and Tutor in Dental Medicine.

ROY O. GREEP, PH.D., Professor of Anatomy in the School of Dental Medicine and Dean.

ANNA-MARIE GRØN, D.D.S., Instructor in Orthodontics.

POUL GRØN, D.D.M., Assistant Professor of Dentistry at the Forsyth Dental Infirmary for Children.

WALTER C. GURALNICK, D.M.D., Assistant Clinical Professor of Oral Surgery.

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- CHESTER S. HANDELMAN, D.M.D., Research Fellow in Orthodontics.
- E. ROBERT HAYNES, D.M.D., Instructor in Operative Dentistry.
- JOHN W. HEIN, D.M.D., PH.D., Professor of Dentistry at the Forsyth Dental Infirmary for Children and Director, Forsyth Dental Infirmary for Children.
- PHILIP F. HIRSCH, PH.D., Assistant Professor of Pharmacology in the School of Dental Medicine.
- TERRENCE D. HOOVER, D.M.D., Instructor in Pediatric Dentistry.
- LOUISE W. HORD, B.S., Lecturer on Ecological Dentistry.
- MINORU HORIUCHI, D.M.D., Instructor in Dental Medicine.
- EDWARD E. HUNT, JR., PH.D., Assistant Professor of Anthropology at the Forsyth Dental Infirmary for Children.
- JAMES T. IRVING, PH.D., M.D., Professor of Physiology at the Forsyth Dental Infirmary for Children.
- LEIF B. JOHANNESSEN, D.M.D., Research Associate in Dental Medicine.
- ELIAS J. KAUFMAN, D.M.D., Research Fellow in Pediatric Dentistry.
- YOUNG H. KIM, D.D.S., Instructor in Orthodontics.
- PETER G. KIMBALL, D.M.D., Assistant in Dental Medicine.
- ALVIN A. KRAKOW, D.D.S., Instructor in Dental Medicine.
- DONALD L. LEAKE, D.M.D., Teaching Fellow in Oral Surgery.
- CLEMENT S. C. LEAR, B.D.S., D.M.D., Research Associate in Orthodontics.
- LAURE LEBRET, D.F.M.P., Instructor in Orthodontics.
- ROBERT C. LINCOLN, D.M.D., Instructor in Dental Medicine.
- MAX LISTGARTEN, D.D.S., Research Associate in Periodontology.
- WALTER J. LOESCHE, D.M.D., Research Fellow in Periodontology.
- PAUL K. LOSCH, D.D.S., Associate Professor of Pediatric Dentistry at the Children's Hospital and Chief of the Dental Service at the Children's Hospital Medical Center.
- GORDON J. MACDONALD, PH.D., Research Fellow in Physiology in the School of Dental Medicine.
- CLIFFORD MARKS, D.D.S., Research Fellow in Orthodontics.
- ROBERT J. MATUSOW, D.M.D., Instructor in Operative Dentistry.

SCHOOL OF DENTAL MEDICINE

SALVATORE A. MIGLIORE, D.D.S., Research Fellow in Orthodontics.

RICHARD L. MINER, D.D.S., Instructor in Oral Surgery.

COENRAAD F. A. MOORREES, D.D.S., Associate Professor of Orthodontics at the Forsyth Dental Infirmary for Children.

PAUL L. MUNSON, PH.D., Professor of Pharmacology in the School of Dental Medicine.

JOHN NALBANDIAN, D.M.D., Associate in Periodontology.

LOUIS A. NORTON, D.M.D., Research Fellow in Orthodontics.

JOSEPH C. OAKLEY, D.M.D., Assistant in Dental Medicine (through August 31, 1963).

J. HOWARD OAKS, D.M.D., Instructor in Operative Dentistry, Tutor in Medical Science, and Assistant Dean of the School of Dental Medicine for Student Affairs.

PETER OFNER, PH.D., Research Associate in Pharmacology in the School of Dental Medicine.

IKUO OHMORI, D.D.S., Research Fellow in Dental Medicine.

GERALD L. O'NEILL, D.M.D., Assistant Clinical Professor of Operative Dentistry.

ALVARO I. ORDONEZ, D.D.S., Research Fellow in Orthodontics.

ILKKA K. PAUNIO, L.D.S., Research Fellow in Dental Medicine.

ANGELA A. V. PERONACE, D.D.S., Research Fellow in Dentistry.

E. ALBERT PETERSEN, D.M.D., Assistant in Pediatric Dentistry.

EARLE H. ROSENBERG, D.M.D., Instructor in Dental Medicine.

EDWARD ROSENTHAL, D.M.D., Assistant in Orthodontics.

JULIAN M. ROTHBLATT, D.M.D., Instructor in Orthodontics.

JAMES H. SHAW, PH.D., Associate Professor of Biological Chemistry in the School of Dental Medicine.

LEONARD B. SHULMAN, D.M.D. Research Fellow in Dental Medicine.

EDWARD I. SILVER, D.M.D., Lecturer on Orthodontics.

SIGMUND S. SOCRANSKY, D.D.S., Associate in Dental Medicine at the Forsyth Dental Infirmary for Children.

MORTON SPECK, D.M.D., Instructor in Orthodontics.

JAMES SPRINGER, D.M.D., Instructor in Dental Medicine.

ARTHUR I. STEINBERG, D.D.S., Research Fellow in Periodontology.

BURT D. STERN, D.M.D., Research Associate in Periodontology.

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MOSES S. STROCK, D.M.D., Associate Clinical Professor of Dental Medicine.

FRANK R. SUSI, D.M.D., Research Fellow in Periodontology.

LENNARD T. SWANSON, D.M.D., Clinical Associate in Orthodontics.

EDWARD A. SWEENEY, D.M.D., Research Fellow in Pediatric Dentistry.

NORTON S. TAICHMAN, D.D.S., Research Fellow in Periodontology.

ARMEN H. TASHJIAN, JR., M.D., Instructor in Pharmacology in the School of Dental Medicine.

JOHN B. TAYLOR, D.D.S., Instructor in Prosthetic Dentistry.

KAMAL D. THANIK, B.D.S., Instructor in Dental Medicine.

CLAUDE W. THOMPSON, JR., D.M.D., Instructor in Operative Dentistry.

G. EARL THOMPSON, D.M.D., Associate Clinical Professor of Operative Dentistry.

NORMAN TRIEGER, D.M.D., Clinical Associate in Dental Medicine.

LOUIS J. VALENTE, D.M.D., Research Fellow in Dental Medicine.

JOHANNES VAN HOUTE, B.D.S., Research Fellow in Dental Medicine.

MYRON J. VAN LEEUWEN, D.D.S., Assistant Clinical Professor of Operative Dentistry.

ALFRED WEINSTOCK, D.D.S., Research Fellow in Periodontology.

DAVID WEISBERGER, D.M.D., M.D., Professor of Dental Medicine and Chief of the Dental Department at the Massachusetts General Hospital.

WILLIAM D. WELLOCK, D.M.D., M.P.H., Lecturer on Ecological Dentistry.

HERBERT WELLS, D.M.D., Assistant Professor of Dentistry and Director of the Clinic.

PHILIP H. WHITE, D.M.D., Lecturer on Oral Surgery.

WILLIAM L. WILSON, D.M.D., Lecturer on Orthodontics.

ROY E. WUTHIER, PH.D., Associate in Biological Chemistry at the Forsyth Dental Infirmary for Children and Tutor in Medical Science.

GEORGE H. WYSHAK, PH.D., D.M.D., Clinical Associate in Dental Medicine.

SCHOOL OF DENTAL MEDICINE

S. JEROME ZACKIN, D.M.D., Research Associate in Periodontology.

Affiliated:

RICHARD E. COGGESHALL, M.D., Research Fellow in Anatomy.

RAYMOND L. HAYES, JR., Ph.D., Instructor in Anatomy.

HARVARD UNIVERSITY

ANNOUNCEMENT OF COURSES

During the first two academic years, dental and medical students pursue courses of study that are alike in philosophy and objectives but that differ in content. Special exercises have been devised for dental and medical students to illustrate for each group how the basic sciences serve their respective professions. Tutorial study of dental students is under the direction of the dental staff.

As the entering classes are limited, it is possible to reduce the time usually involved in courses of dental techniques. Individual instruction, demonstrations, seminars, and conferences replace the traditional lecture system to a large degree.

A recently initiated program to instruct third and fourth year students in effective use of ancillary dental personnel provides experience for each student in the performance of clinical procedures with the aid of a trained dental assistant or hygienist. Auxiliary personnel are also utilized to relieve the student of a variety of routine but time-consuming tasks.

DENTAL ANATOMY. First semester, third year. Assistant Professor VAN LEEUWEN and Dr. OAKS.

Instruction in dental anatomy and tooth morphology. Special emphasis is placed on individual tooth form and the relationship of the tooth to adjacent teeth, opposing teeth and supporting tissue. Technique practice in reproduction of tooth form is stressed using natural extracted teeth.

GENETICS AND ANTHROPOLOGY. First semester, third year. Assistant Professor HUNT.

Lectures are given with the purpose of reviewing the principles of genetics, including studies of populations. A brief survey of anthropology is given with major emphasis on evolutionary changes in the head. Dental implications are stressed throughout the course.

INTRODUCTION TO DENTAL RESEARCH. First semester, third year. Drs. WELLS, MUNSON, and ASSOCIATES.

A series of ten or more one hour lectures on specific research

SCHOOL OF DENTAL MEDICINE

projects available for student participation in the research laboratories of the School of Dental Medicine.

NUTRITION. Third year. Associate Professor SHAW.

Discussion of relations of nutrition to the development, maturation and maintenance of the oral tissues. Discussion of nutritional requirements, relative values of various foods and the preparation of diet histories. Clinic practice in the evaluation of diet histories and in the development of suitable recommendations for the patient.

ORAL HISTOPATHOLOGY. Third year. Associate Professor GOLDHABER; Drs. ALBRIGHT, NALBANDIAN, STERN, and ZACKIN.

The course consists of weekly two hour sessions composed of lectures, laboratory and student reports on the literature. The subject matter includes the histology and pathology (light microscopy and electron microscopy) of teeth and pulp, periodontium, oral mucosa, salivary glands and bone. Attempts are made to correlate the microscopic picture with the clinical findings. Emphasis is placed on experimental pathology.

PUBLIC HEALTH DENTISTRY. Third year. Assistant Professor DUNNING; Dr. WELLOCK; Drs. LEAVELL, MACMAHON, PAUL, and SCHMIDT from the School of Public Health.

Public health principles and practices with emphasis on the participation of the dentist. Elements of biostatistics and epidemiology. Lectures, seminars and field trips.

DENTAL MEDICINE. Third and fourth years. Professor WEISBERGER; Drs. TRIEGER, WYSHAK, BOOTH, CHRISTMAN, ROSENBERG, KIMBALL, and LEAKE.

A course devoted to the diagnosis and treatment of oral diseases, i.e., diseases of the periodontium, dental pulp, oral mucosa and other oral structures together with their correlation to systemic conditions. Lectures, seminars, clinical practice and observation are given both in the Dental Infirmary and at the Massachusetts General Hospital. Assignments are also made at the Peter Bent Brigham Hospital.

Infirmary procedures, identification of oral structures, methods of oral examination, history taking, and common methods of diagnosis for dental and oral disease are given in both years, supplemented by practice in the general clinic.

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In the third year the clinical and pathological presentation of pulpalperiapical disease is integrated with the teaching of oral pathology. In this manner the student achieves an early appreciation of the pathological course of events and the clinical symptoms which necessitate endodontic therapy. Clinical demonstrations and laboratory technique exercises are given on bacteriological culturing, biomechanical debridement and canal obturation techniques preceding the assignment of patients for clinical experience.

In the fourth year, diagnostic conference and clinical experience involving conservative root canal therapy and the indications and application of periapical surgery round out the student's introduction to the field.

ENDODONTICS. Third and fourth years. Drs. O'NEILL and MATUSOW.

In the third year the clinical and pathological presentation of pulpalperiapical disease is integrated with the teaching of oral pathology. In this manner the student achieves an early appreciation of the pathological course of events and the clinical symptoms which necessitate endodontic therapy. Clinical demonstrations and laboratory technique exercises are given on bacteriological culturing, biomechanical debridement and canal obturation techniques preceding the assignment of patients for clinical experience.

In the fourth year, diagnostic conference and clinical experience involving conservative root canal therapy and the indications and application of periapical surgery round out the student's introduction to the field.

OPERATIVE DENTISTRY. Third and fourth years. Associate Professor G. E. THOMPSON and Assistant Professor VAN LEEUWEN; Drs. BRDEVOLD, ETHERINGTON, O'NEILL, ADAMS, BAILEY, DOGON, HAYNES, MATUSOW, OAKS, and C. W. THOMPSON.

Early student-patient contact and immediate clinical application of learned technical procedures are emphasized. In the third year instruction is given in oral hygiene, accepted methods of dental prophylaxis and technique of cavity preparation in conjunction with a study of the various types of restorative materials.

In the fourth year gold foil technique is given, new operative procedures introduced, and clinical practice in all phases of operative dentistry is continued.

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ORAL SURGERY. Third and fourth years. Professor WEISBERGER; Drs. GURALNICK, DeWILDE, BOOTH, CHRISTMAN, LINCOLN, and MINER.

The students are taught through lectures and seminars the principles of surgery as applied to exodontia, minor oral surgery, maxillo-facial surgery and fractures and anaesthesia.

Individual clinical instruction in exodontia, minor oral surgery and anaesthesia is given at the Dental Infirmary.

In the fourth year students are assigned to the Massachusetts General Hospital as clinical clerks on the Dental Service. At the hospital more extensive surgery of the oral cavity including traumatic injuries to the face and jaws is observed. The student takes active part in the study and treatment of such cases. Additional training in oral surgery is made available at the Boston City Hospital.

ORTHODONTICS. Third and fourth years. Associate Professor C. F. A. MOORREES; Drs. COHEN, SWANSON, A. M. GRØN, KIM, and LEBRET.

The treatment of patients with different occlusal anomalies, in collaboration with postgraduate Fellows, provides a means to become thoroughly familiar with clinical aspects of orthodontics during the third and fourth years. This experience adds a measure of perspective for the theoretical part of the course that consists of lectures, seminars, and diagnostic conferences. Emphasis is placed on growth and development, cephalometrics, as well as specific phases of genetics, biostatistics, anthropology and histology. Clinical demonstrations and laboratory technique exercises serve to enhance comprehension of treatment procedures. Patients are obtained from the Forsyth Dental Infirmary for Children, while the cleft palate clinic of The Children's Hospital Medical Center will collaborate in the teaching efforts. The over-all objective of the course is to develop sound judgment as a basis for diagnosis and care of children in clinical practice.

PEDIATRIC DENTISTRY. Third and fourth years. Associate Professor LOSCH; Drs. BUDDE, HOOVER, C. COHEN, and PETERSEN.

Lectures and demonstrations introduce the subject in the third year with emphasis on the physical and psychological development of the child. In the general clinic, the student, under supervision, practices routine dental care for children and learns principles of patient and parent instruction in oral hygiene and personal caries control measures.

In the fourth year, the student continues practice in pediatric dentistry in the general clinic. In addition, he visits The Children's

HARVARD UNIVERSITY

Hospital Medical Center where, under the guidance of the dental staff, he views those conditions of both in- and out-patients best seen in a hospital atmosphere. Special consideration is given to those patients whose systemic disease includes oral manifestations. Individually, he observes the staff at dental operations performed in the main operating rooms of the hospital. Ward rounds by the dental staff are given regularly. Students attend the clinico-pathological conferences and are assigned to other teaching exercises given by the general staff of the hospital.

PERIODONTICS. Third and fourth years. Associate Professor GOLDHABER; Drs. EPSTEIN, SOCRANSKY, NALBANDIAN, STERN, and ZACKIN.

The student is taught to recognize and diagnose periodontal disease and to comprehend its pathogenesis. He is expected to understand the role of local etiological factors as well as the part played by systemic disease in modifying tissue response to local irritations.

With regard to therapy, emphasis is placed on the elimination of local factors and the institution of preventive procedures. In addition, he is taught the principles of occlusal equilibration and splinting of loose teeth. All students are required to perform periodontal surgery.

PROSTHETIC DENTISTRY. Third and fourth years. Assistant Clinical Professors EHRLICH and FARRELL; Drs. ATWOOD, FISHMAN, GOLD, and TAYLOR.

Prosthetic dentistry which includes complete, fixed and removable prosthesis is taught in the third and fourth years. Through lectures, conferences and demonstrations the student receives clinical and laboratory instruction in the anatomy and physiology of the mouth as it applies to prosthetic dentistry, and in the materials and techniques of prosthetic restoration directed toward oral health, function and aesthetics. Every effort is made to provide early clinic contacts and to teach techniques on clinic cases. The high teacher-student ratio, small classes and special physical facilities favor this type of instruction.

PSYCHOSOCIAL PROBLEMS IN DENTISTRY. Third and fourth years. Drs. GIDDON, HUNT, and TRIEGER of the School of Dental Medicine; Drs. BALDWIN, HACKETT, KRAVITZ, ORNE, SHOR, BUSFIELD, and GUSTAFSON of the Medical School, and Dr. KING of the University Health Services.

SCHOOL OF DENTAL MEDICINE

A lecture and seminar series focusing on those aspects of psychiatry, psychology, and sociology which are important to the practice of dentistry. Topics to be covered are: the dentist in society, dentist-patient relationship, the meaning of dental procedures to the patient, the significance of dento-facial deformities, recognition of behavior pathology, management of problem patients, oral habits, "psychosomatic" dental disorders, non-organic factors in pain, theoretical and practical aspects of hypnosis, psychophysiology of the oral cavity, and research methodology. Case presentations of clinic patients will supplement these discussions.

RADIOLOGY. Third and fourth years. Dr. DEWILDE.

Principles of applied roentgenology and the interpretation of radiographs, with consideration of the electro-physical basis of roentgenology, are covered in the third year. Practice in radiological technique and interpretation is given in both years.

RESEARCH PROJECT. Third and fourth years. Associate Professor MUNSON; Drs. BRUDEVOLD, GREEP, IRVING, WEISBERGER, M. COHEN, GOLDHABER, SHAW, GURALNICK, HUNT, ALBRIGHT, GIBBONS, HIRSCH, SOCRANSKY, SWANSON, WELLS, WYSHAK, AMDUR, ARMSTRONG, NALBANDIAN, WUTHIER, and GIDDON.

In order to gain a more realistic appreciation of the nature of scientific research, all students of the Harvard School of Dental Medicine, as a requirement for graduation, participate in a laboratory or clinical investigation of their own choosing. By the end of the first semester of the third year, after completion of the course, Introduction to Dental Research, the student has chosen a research supervisor from the faculty and the subject to be investigated. He presents a plan for his research project in the form of a seminar at the beginning of the second semester. During the rest of the third year, and in some cases during the summer months, he attempts to master the techniques necessary for his work. During the fourth year, with the advice and aid of the faculty research supervisor, the project is carried forward, and at the end of the year, the student presents a seminar summarizing his results. Both the third and fourth year seminars are also required in written form for permanent reference in the Library.

PATIENT MANAGEMENT: PHARMACOLOGICAL AND PSYCHOLOGICAL ASPECTS.
Fourth year. Drs. TRIEGER and GIDDON; Drs. MUNSON and HIRSCH;

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Drs. V. MARK, FLACKE, FEDERMAN, M. SWARTZ, M. ALPER of the Medical School; Dr. J. MURPHY of the Massachusetts General Hospital.

Practical pharmacological and psychological recommendations are considered in the management of the dental patient. The use of the more important classes of drugs is discussed in the context of the total patient. The doctor-patient relationships and other psychological aspects of management are presented in conjunction with the fourth year course, *Psychosocial Problems in Dentistry*.

PRACTICE MANAGEMENT AND DENTAL JURISPRUDENCE. Second semester, fourth year. Dr. DUNNING; Dr. FORD from the Medical School.

Lectures and seminars on practice management, ethics and jurisprudence.

SURGICAL ANATOMY OF THE HEAD AND NECK. Fourth year elective offered to selected students for two full weeks in February. Assistant Clinical Professor GURALNICK and Dr. EDWARDS from the Medical School.

The course is designed primarily to enable the student through his own dissections to gain knowledge of the anatomy of operative oral surgery.

The first week is spent in doing eight regional dissections. The second week is devoted to performing specific surgical procedures with emphasis on anatomical dissection. The laboratory exercises are supplemented by lectures and by the use of motion pictures.

Eligibility for admission is determined by the Fourth Year Promotion Board to whom application should be made by letter prior to December first of the senior year.

COURSE FOR DENTAL GRADUATES

The following course is given in cooperation with the Committee on Courses for Graduates of the Faculty of Medicine.

DENTAL MEDICINE I. Dr. ROY O. GREEP and ASSOCIATES.

This course is designed for dental teachers, foreign students of special ability, and others who wish to combine clinical study with elective research in the laboratories of the School. Only a very small number of students will be admitted. Curriculum will be designed

SCHOOL OF DENTAL MEDICINE

to meet individual needs and the entire facilities of the School may be utilized. Tuition will be at the rate of \$1500 annually.

Four or eight months, October through January and/or February through May; daily, all day, except Saturday afternoons. Attendance limited.

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DIVISION OF HOURS

The tabulated hours below indicate the approximate allotment of time for the third and fourth academic years.

THIRD YEAR	Lectures, Lab. or Demon- stration	Clinic	FOURTH YEAR	Lectures, Lab. or Demon- stration	Clinic
Dental anatomy	45	—	Dental medicine	13	—
Genetics and anthro- pology	16	—	Clinical clerkship, Massachusetts General Hospital	—	60
Introduction to dental research	24	—	Dental Medicine, Peter Bent Brigham Hospital	—	15
Fundamentals of oc- clusion	32	—	Oral diagnosis	13	60
Nutrition	12	—	Endodontics	10	30
Oral histopathology . .	70	—	Operative dentistry .	36	118
Public health dentistry	32	9	Oral surgery and anaesthesia	32	40
Dental medicine	16	—	Boston City Hospital	—	15
Dental medicine, Massachusetts General Hospital	—	4	Orthodontics	24	126
Oral diagnosis	16	52	Pediatric dentistry at The Children's Hospital	—	35
Endodontics	10	20	Periodontics	8	72
Operative dentistry .	120	160	Prosthetic dentistry Complete denture prosthesis	10	103
Oral hygiene and prophylaxis	18	20	Removable denture prosthesis	10	90
Oral surgery	—	3	Fixed partial pros- thesis	97	196
Oral surgery, anaesthesia	8	—	Psychosocial prob- lems in dentistry . .	20	—
Orthodontics	68	120	Radiology	8	20
Pediatric dentistry . .	12	20	Student research and seminar	75	—
Periodontics	32	96	Patient management .	16	—
Prosthetic dentistry Complete denture prosthesis	90	144	Practice management and dental juris- prudence	6	—
Removable partial prosthesis	42	72			
Psychosocial problems in dentistry	10	—			
Radiology	12	10			
Student research and seminar	75	—			

DEGREES CONFERRED

ON JUNE 13, 1963 ELEVEN DEGREES WERE CONFERRED
AS FOLLOWS:

D.M.D.

NELSON EDGAR BAILEY, A.B. (*Susquehanna Univ.*) 1957.
ISRAEL LEON DOGON, L.S.D. (*Univ. of London*) 1957.
ROBERT EDGAR EVANS, A.B. (*Hamilton Coll.*) 1959.
STEPHEN HARVEY GAMM, A.B. (*Brandeis Univ.*) 1959.
ELIAS JACOB KAUFMAN, A.B. (*Cornell Univ.*) 1959.
CLEMENT SAMUEL COPE LEAR, B.D.S. (*Univ. of Otago*) 1953.
JOHN EDMOND O'CONNOR, A.B. (*Boston Coll.*) 1959.
LOUIS JOHN VALENTE

D.M.D. cum laude

HARRY KUSHNIR, A.B. 1959.
HUGH STANFORD MCLEOD, A.B. (*Reed Coll.*) 1957.

D.M.D. magna cum laude

JOEL GOLDIN, A.B. (*Amherst Coll.*) 1959.

SCHOOL OF DENTAL MEDICINE STUDENTS

FOURTH YEAR CLASS (1964)

- Carlin, Richard Thomas, A.B. (*Clark Univ.*) 1960. Tarrytown, N. Y.
 Falla, William Stinson, S.B. (*Boston Coll.*) 1960. Harwichport
 *Hodge, Archibald Talbot, A.B. (*Amherst Coll.*) 1958. [Univ. of
 Rochester School of Medicine]. Rochester, N. Y.
 Poczatek, Zygmunt Walente, S.B. (*Boston Coll.*) 1960. New Bedford
 Stark, Lawrence Wendell, A.B. (*Duke Univ.*) 1953. Ridgewood, N.J.

THIRD YEAR CLASS (1965)

- Beck, Robert Lee, A.B. (*Univ. of Virginia*) 1958. San Diego, Calif.
 Bleil, Bruce Thompson, A.B. (*Rice Univ.*) 1961. Houston, Texas
 Davidson, William Martin, A.B. (*Dartmouth Coll.*) 1960. Newton
 Garant, Philias Roy, S.B. (*Tufts Univ.*) 1958. Fall River
 ‡Harden, Lewis Brown (*Iowa State Teachers Coll.*) Cedar Falls, Iowa
 Pekruhn, Richard Barnhill, A.B. (*Oberlin Coll.*) 1961. Steubenville, Ohio
 Suskin, William Howard, A.B. (*New York Univ.*) 1947. Hewlett, N. Y.
 Williston, William Curtis, S.B. (*Coll. of the Holy Cross*) 1957. Canton

SECOND YEAR CLASS (1966)

- Atikian, Hrair H, A.B. (*New York Univ.*) 1962. Boonton, N. J.
 Binder, Robert Edward, S.B. (*Northeastern Univ.*) 1960. Hyde Park
 Bowen, Charles Raymond, A.B. (*Susquehanna Univ.*) 1962. Selinsgrove, Pa.
 Clausen, Jack Lewis, S.B. (*Stanford Univ.*) 1961. Hollywood, Calif.
 ‡Cotmore, John Mason (*Temple Univ.*) London, England
 Gettleman, Lawrence Marvin, A.B. (*Rutgers Coll.*) 1962. Miami Beach, Fla.
 Gordon, George David, A.B. (*Bowdoin Coll.*) 1961. Belmont
 Gracia, Robert Manuel, A.B. (*Coll. of the Holy Cross*) 1962. New Bedford

‡ Admitted on basis of three years' college work.

* Transferred to third year class.

SCHOOL OF DENTAL MEDICINE

- Mulvihill, James Edward, A.B. (*Coll. of the Holy Cross*) 1962. Boston
 Perkell, Joseph Shaile, s.B. (*Massachusetts Inst. of Technology*) 1962. Coral Gables, Fla.
 Robinson, Jiles Leslie, Jr., A.B. 1962. Washington, D. C.
 Siegel, Carl Leonard, A.B. (*Lafayette Coll.*) 1962. New York, N. Y.
 Stanley, Robert Louis, A.B. (*Coll. of the Holy Cross*) 1962. Brooklyn, N. Y.
 Wing, Kenneth Richmond, A.B. (*Wesleyan Univ.*) 1962. Cranston, R.I.

FIRST YEAR CLASS (1967)

- Anapolle, Steven Eric, A.B. (*Boston Univ.*) 1963. Newton Centre
 Balaban, Stuart James, s.B. (*New York Univ.*) 1963. New York, N.Y.
 Dick, Douglas Shelton A.B. (*Yale Univ.*) 1963. Wellesley Hills
 Donoff, Robert Bruce, s.B. (*Brooklyn Coll.*) 1963. Brooklyn, N.Y.
 ‡Elias, Arthur Charles (*Brandeis Univ.*). Westbury, N.Y.
 Goldberg, Norman Leon, A.B. (*Brandeis Univ.*) 1963. Newton
 Hilzenrath, Stephen Sidney, A.B. (*Brandeis Univ.*) 1963. New York, N. Y.
 Hirschman, Richard David, A.B. (*Brooklyn Coll.*) 1963. Brooklyn, N. Y.
 Knoettner, Philip Val, A.B. (*Dartmouth Coll.*) 1963. Bedford, N. H.
 Mopsik, Edward Robert, s.B. (*Queens Coll.*) 1963. Forest Hills, N. Y.
 Rowan, Michael Edward, A.B. 1963. Wellesley Hills
 ‡Sande, David Lewis, (*Univ. of North Dakota*) Grand Forks, N. Dak.
 Scharke, Clifford Craig, A.B. (*New York Univ.*) 1963. Jamaica, N. Y.
 Super, Stuart, A.B. (*New York Univ.*) 1963. Brooklyn, N. Y.

DENTAL SCHOOL SUMMARY 1963-64

Fourth Class	5
Third Class	8
Second Class	14
First Class	14
	—
Total	41

‡ Admitted on basis of three years' college work.

HARVARD UNIVERSITY

COLLEGES REPRESENTED

Amherst College	1	Oberlin College	1
Boston College	2	Queens College	1
Boston University	1	Rice University	1
Bowdoin College	1	Rutgers University	1
Brandeis University	3	Stanford University	1
Brooklyn College	2	Susquehanna University	1
Clark University	1	Temple University	1
Duke University	1	Tufts University	1
Dartmouth College	2	Virginia, University of	1
Harvard University	2	Wesleyan University	1
Holy Cross, College of the	4	Yale University	1
Iowa State Teachers College	1	Total number of students	41
Lafayette College	1		
Massachusetts Institute of Technology	1	Entered advanced standing	1
New York University	5	Number of colleges represented	28
North Dakota, University of	1	Number of college graduates	38
Northeastern University	1	Number of non-graduates	3

SCHOOLS REPRESENTED BY STUDENTS WHO ENTERED HARVARD SCHOOL OF DENTAL MEDICINE WITH ADVANCED STANDING

University of Rochester School of Medicine 1

PROFESSORS EMERITI

FULLER ALBRIGHT, M.D.	Professor of Medicine
JOSEPH C. AUB, M.D.	Professor of Research Medicine
JAMES B. AYER, M.D.	James Jackson Putnam Professor of Neurology (died October 25, 1963)
HERRMAN L. BLUMGART, M.D.	Professor of Medicine
C. SIDNEY BURWELL, M.D.	Samuel Levine Professor of Medi- cine
ALLAN M. BUTLER, M.D.	Professor of Pediatrics
EDWARD D. CHURCHILL, M.D.	John Homans Professor of Surgery
STANLEY COBB, M.D.	Bullard Professor of Neuropa- thology
EDWIN B. DUNPHY, M.D.	Henry Willard Williams Professor of Ophthalmology at the Massa- chusetts Eye and Ear Infirmary
CYRUS H. FISKE, M.D.	Professor of Biological Chemistry
FELIX G. FLEISCHNER, M.D.	Clinical Professor of Radiology
ALEXANDER FORBES, M.D.	Professor of Physiology
CHESTER N. FRAZIER, M.D.	Edward Wigglesworth Professor of Dermatology
A. BAIRD HASTINGS, PH.D.	Hamilton Kuhn Professor of Bi- ological Chemistry
PARKER HEATH, M.D.	Clinical Professor of Ophthalmol- ogy
A. LEROY JOHNSON, D.M.D.	Professor of Clinical Dentistry
CHESTER M. JONES, M.D.	Clinical Professor of Medicine
VARAZTAD H. KAZANJIAN, D.M.D., M.D.	Professor of Plastic Surgery
WILLIAM E. LADD, M.D.	William E. Ladd Professor of Child Surgery
SAMUEL A. LEVINE, M.D.	Clinical Professor of Medicine
CHARLES C. LUND, M.D.	Clinical Professor of Surgery
LELAND S. MCKITTRICK, M.D.	Clinical Professor of Surgery
J. HOWARD MEANS, M.D.	Jackson Professor of Clinical Medi- cine

HARVARD MEDICAL SCHOOL

JOE V. MEIGS, M.D.	Clinical Professor of Gynecology (died October 24, 1963)
PHILIP E. MELTZER, D.M.D., M.D.	Clinical Professor of Otolaryngology
LEROY M. S. MINER, D.M.D., M.D.	Professor of Clinical Oral Surgery
CHARLES G. MIXTER, M.D.	Clinical Professor of Surgery
FRANCIS C. NEWTON, M.D.	Clinical Professor of Surgery
JOHN C. ROCK, M.D.	Clinical Professor of Gynecology
LEROY A. SCHALL, M.D.	Walter Augustus Lecompte Professor of Otolaryngology and Professor of Laryngology
GEORGE C. SHATTUCK, M.D.	Clinical Professor of Tropical Medicine
RICHARD M. SMITH, M.D.	Thomas Morgan Rotch Professor of Pediatrics
HARRY C. SOLOMON, M.D.	Professor of Psychiatry
FRITZ BRADLEY TALBOT, M.D.	Clinical Professor of Pediatrics
KURT H. THOMA, D.M.D.	Professor of Oral Surgery and Charles A. Brackett Professor of Oral Pathology
ERNEST E. TYZZER, M.D.	George Fabyan Professor of Comparative Pathology and Professor of Tropical Medicine
FREDERICK H. VERHOEFF, M.D.	Professor of Ophthalmic Research
CHARLES J. WHITE, M.D.	Edward Wigglesworth Professor of Dermatology
JAMES C. WHITE, M.D.	Professor of Surgery at the Massachusetts General Hospital
PAUL I. YAKOVLEV, M.D.	Clinical Professor of Neuropathology

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† A. & S. Faculty.
* S.P.H. Faculty.

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* S.P.H. Faculty.

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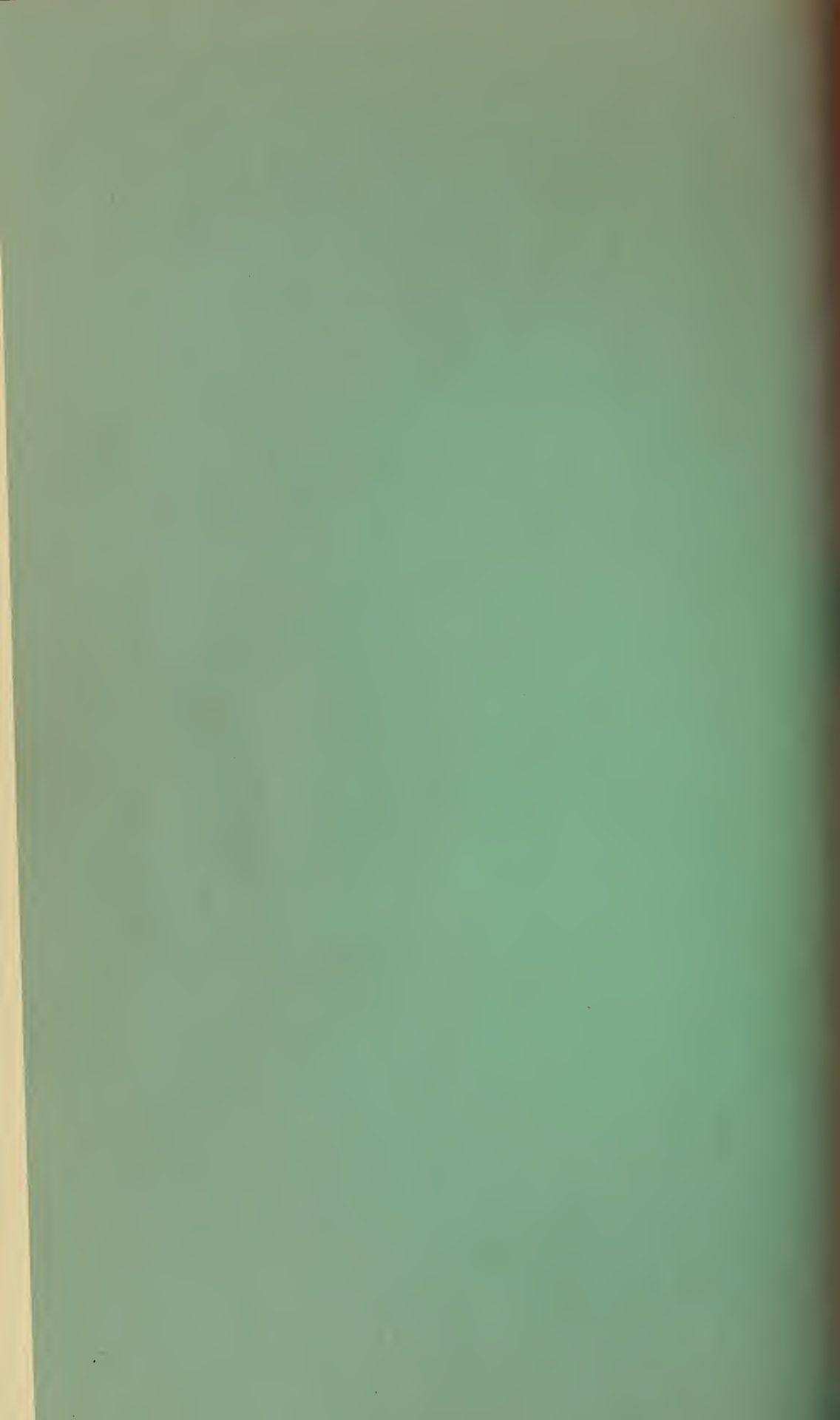
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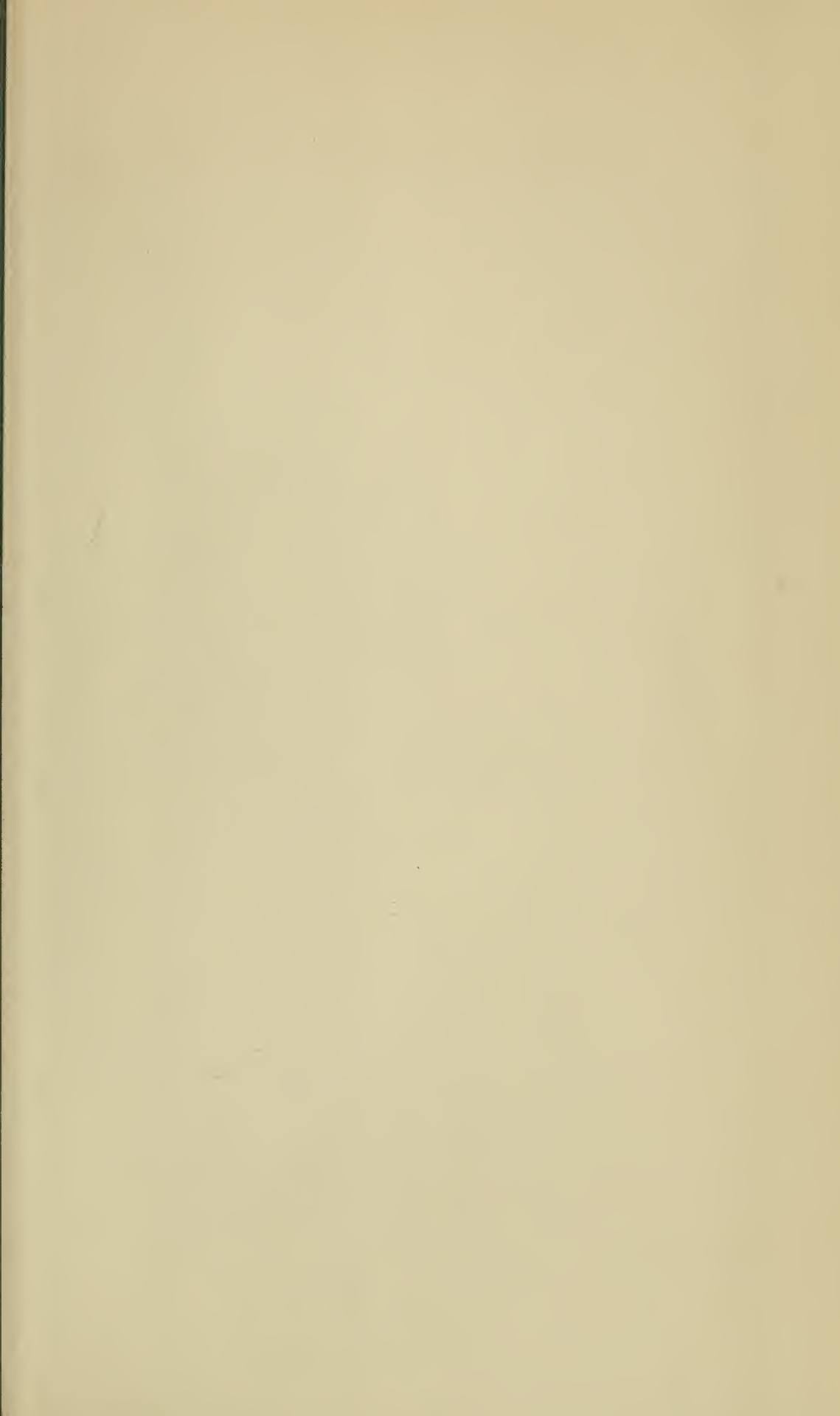
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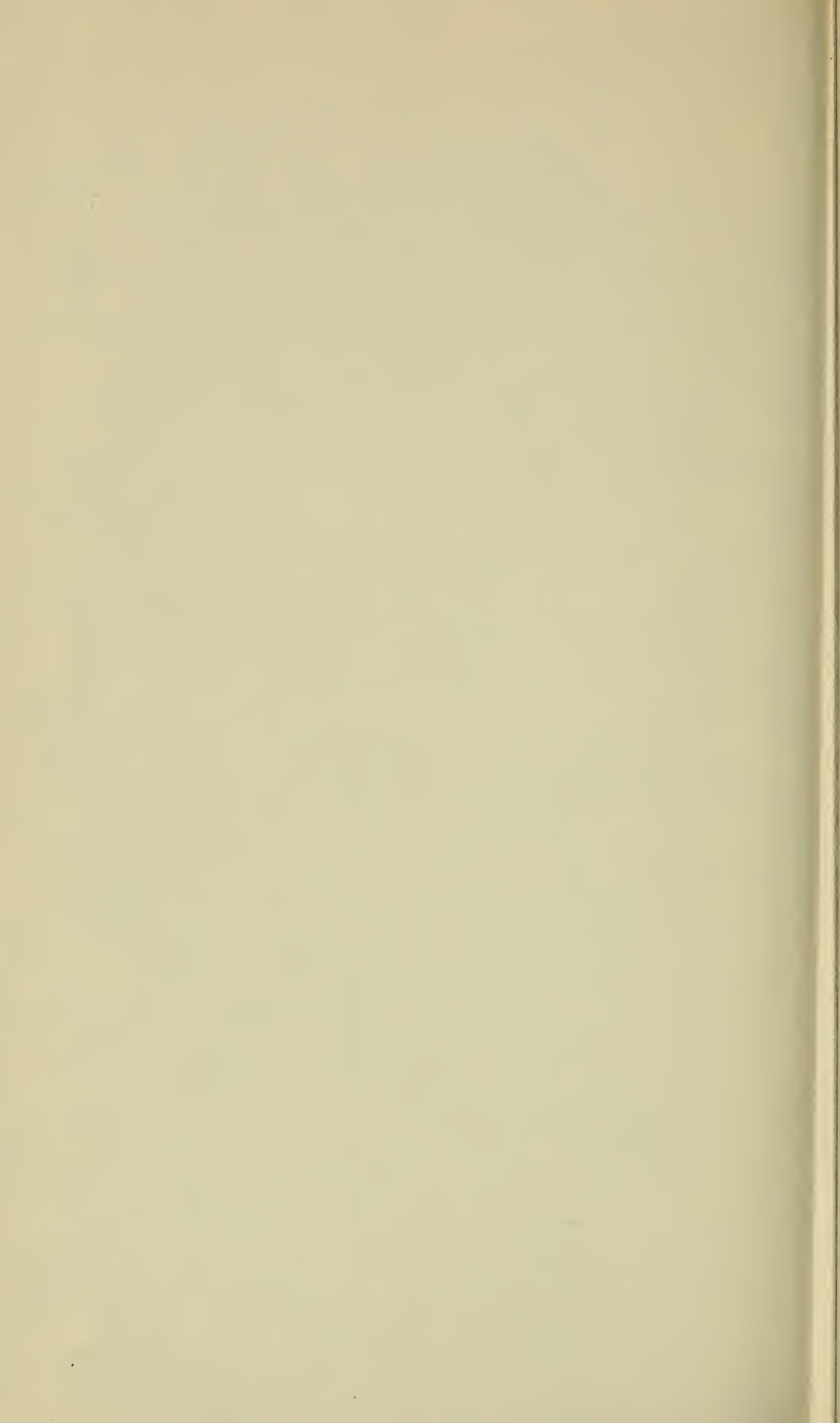
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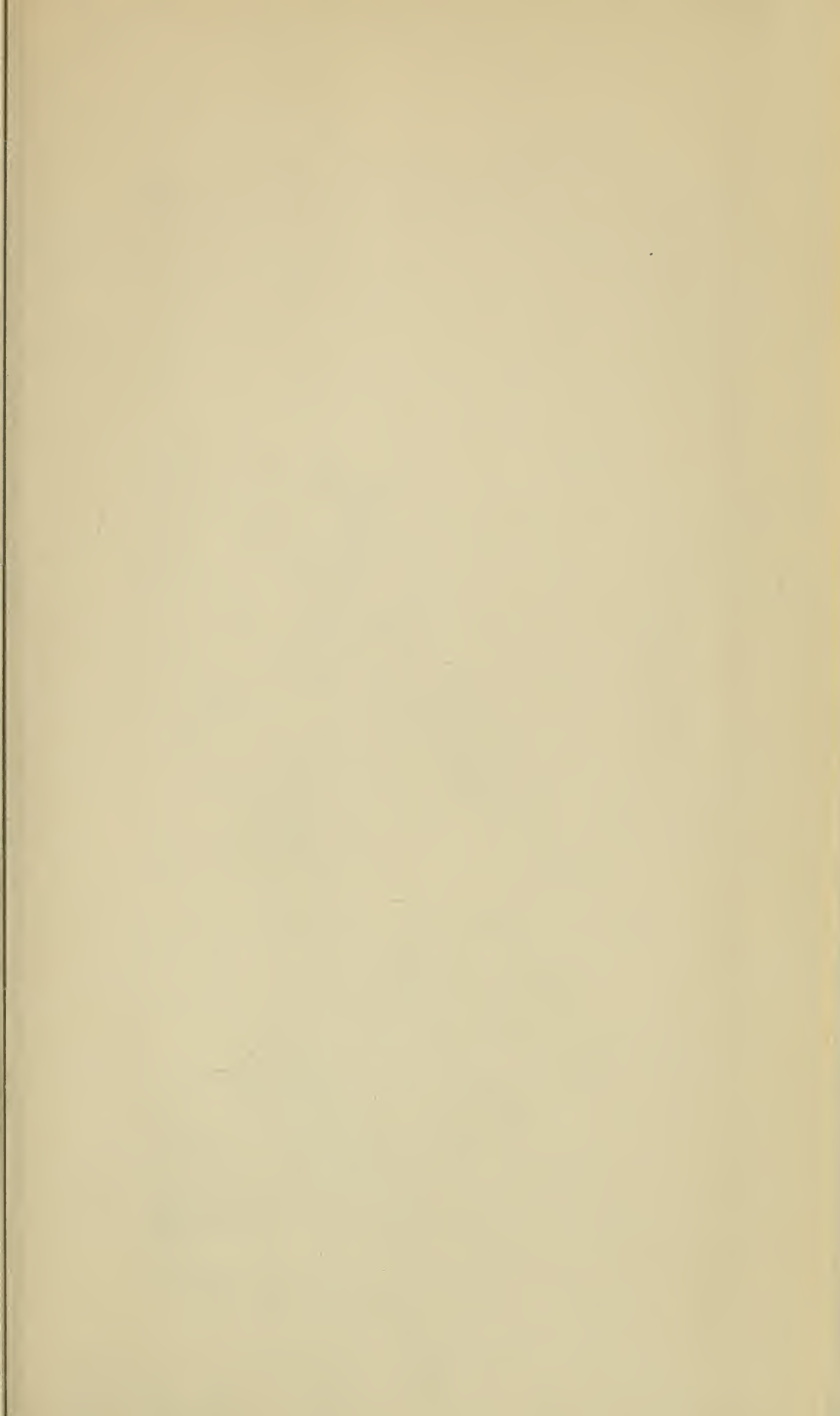
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